

No. 16388

SEE ALSO B/08

United States
Court of Appeals
for the Ninth Circuit

GRACE & CO. (Pacific Coast), a Corporation,
Appellant,

vs.

THE CITY OF LOS ANGELES, et al.,
Appellee.

Transcript of Record

Appeal from the United States District Court for the
Southern District of California
Central Division

FILED

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PAUL E. DARTEN, CLERK

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[Clerk's Note: When deemed likely to be of an important nature, errors or doubtful matters appearing in the original certified record are printed literally in italic; and, likewise, cancelled matter appearing in the original certified record is printed and cancelled herein accordingly. When possible, an omission from the text is indicated by printing in italic the two words between which the omission seems to occur.]

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In the District Court of the United States for the
Southern District of California, Central Division
Civil No. 20624-HW

GRACE & CO. (Pacific Coast), a Corporation,
Plaintiff,
vs.

THE CITY OF LOS ANGELES, a Municipal
Corporation; OUTER HARBOR DOCK AND
WHARF CO., a California Corporation; and
DOES 1 THROUGH 21, Individuals and Cor-
porations,
Defendants.

AMENDED COMPLAINT
(For Damages)

Plaintiff Grace & Co. (Pacific Coast), a corpora-
tion, complains of defendants above named, and for
cause of action alleges:

I.

Plaintiff Grace & Co. (Pacific Coast), is a cor-
poration, organized under the laws of the State of
West Virginia, and duly qualified to do business in
the State of California. Defendant, The City of
Los Angeles, is a municipal corporation, existing
under the laws of the State of California. Defend-
ant, Outer Harbor Dock and Wharf Co. is a cor-
poration, duly organized under the laws of the State
of California. Defendants Does 1 through 21 are
individuals and/or corporations, citizens of or resi-
dents [2*] of California, whose true names are

*Page numbering appearing at foot of page of original Certified
Transcript of Record.

unknown to plaintiff, and who are therefore sued by said fictitious names, who participated in and are jointly liable with the defendants herein by reason of the evidence hereinafter alleged.

II.

Jurisdiction herein exists under Section 1332 of the United States Code by virtue of the fact that this is an action between citizens of different States of the United States, involving in excess of \$3,000.00.

III.

That defendant, The City of Los Angeles is, and at all times alleged herein, was the owner of Berth 59, Los Angeles Harbor and, together with defendant Outer Harbor Dock and Wharf Co., the operator of a certain steel and concrete shed at Berth 59 in that portion of Los Angeles known as San Pedro. That defendants provided the said shed for the receipt of merchandise in transit from various portions of the United States and of the world to various other portions of the United States and the world, said facilities being provided for hire. That said shed is so used to hold goods which have been brought to Los Angeles by ship while awaiting delivery of the same to the owners thereof. That in the course of said business, the aforesaid defendants occupy with respect to the owners of said goods at various times the position of carriers and/or warehousemen and are subject first to the legal obligations placed by the law upon carriers by sea,

and second to those placed upon warehousemen of goods which have been delivered to the port of destination by the said carriers by sea.

IV.

Plaintiff, Grace & Co. (Pacific Coast) was at all times hereinafter stated the owner of approximately 1,960 bags of coffee, the product of various South and Central American countries, which said coffee was at the times hereinafter alleged, in said shed at [3] said Berth 59, having been shortly prior thereto discharged by various vessels and was then and there awaiting delivery to plaintiff.

V.

That defendants maintained beneath said shed and said Berth 59 a certain 8-inch cast-iron water pipe, installed on a date in the remote past which is unknown to plaintiff. That defendants knowingly permitted said pipe to remain beneath said shed although defendants knew, or in the exercise of due care should have known, that said pipe was in an ancient, weak, corroded and decayed condition so that said pipe could not reasonably have been expected to contain water under pressure therein. That defendant thereby knowingly and negligently permitted a dangerous condition to exist upon said premises. That defendants were negligent in the foregoing respects and in all the respects set forth in Paragraph VII hereof.

VI.

That on or about the 12th day of March, 1956, by

reason of the negligence of the defendants, as aforesaid, and as set forth hereinafter, a large quantity of water escaped from said pipe under high pressure, which said quantity of water wet the plaintiff's coffee, to the damage of said coffee in the sum of \$30,000.00 as nearly as the same can now be ascertained.

VII.

That said damage was caused by the negligence of defendants, as aforesaid, and in the following respects:

(a). In that the defendants maintained high water pressure in said pipe without ascertaining whether said pipe was of sufficient strength at said time to withstand said pressure.

(b). In that defendants knowingly omitted to maintain said pipe with the result that said pipe was in such condition that it could not maintain the water pressure placed therein by [4] defendants.

(c). In that said pipe was of such an age as, under existing conditions, to render it unsafe for the purpose intended.

(d). In that defendants failed to keep an adequate watch at said shed and to discover said leakage with reasonable speed, so as to move said coffee from said water as soon as possible.

(e). In other further respects which are not presently known to plaintiff.

VIII.

That on the 25th day of April, 1956, plaintiff

Grace & Co. (Pacific Coast) duly and regularly filed its verified claim covering the above-mentioned damages with Walter C. Peters, the City Clerk of the City of Los Angeles. That said verified claim specified the name and address of claimant, the date and place of the action of which complaint is made, and the extent of the damage received.

That the said claim has been rejected by The City of Los Angeles. That nothing has been paid on account of the said claim or any part thereof.

IX.

That all and singular the premises are true and are within the jurisdiction of this Honorable Court.

Wherefore, Plaintiff prays judgment against defendants as follows:

1. That plaintiff have and recover from defendants the sum of \$30,000.00.

2. That plaintiff have and recover interests and [5] costs herein with such other and further relief as may be just, proper and meet in the premises.

McCUTCHEN, BLACK,
HARNAGEL & GREEN,
PHILIP K. VERLEGER,
ANN E. STODDEN,

By /s/ PHILIP K. VERLEGER,
Attorneys for Plaintiff.

[Endorsed]: Filed November 21, 1956. [6]

[Title of District Court and Cause.]

ANSWER OF CITY OF LOS ANGELES, A
MUNICIPAL CORPORATION, TO
AMENDED COMPLAINT

Comes now the defendant City of Los Angeles, a municipal corporation, and answering the Amended Complaint on file herein, for itself alone and not for any of its co-defendants, admits, denies and alleges as follows:

I.

Answering Paragraph I, defendant admits the allegations therein contained, except that defendant denies, generally and specifically, that it is liable, either jointly or otherwise with the defendants therein named, by reason of the evidence therein alleged, or otherwise or at all.

II.

Answering Paragraph II, defendant admits the allegations [7] therein contained.

III.

Answering Paragraph III, defendant City of Los Angeles admits that it is and at all times alleged in said Amended Complaint was the owner of Berth 59, Los Angeles Harbor, together with a certain transit shed located thereat, which shed was used through and by others to hold goods, but other than as herein expressly admitted, denies, generally and specifically, each and every allegation in said paragraph contained.

IV.

Answering Paragraph IV of the Amended Complaint herein, defendant alleges that it has no information or belief upon the subject sufficient to enable it to answer the allegations therein contained, and basing its denial upon that ground, denies each and every allegation in said paragraph contained.

V.

Answering Paragraph V of the Amended Complaint herein, defendant City of Los Angeles admits that it maintains beneath said shed and said Berth 59 a certain 8-inch cast-iron water pipe as part of a necessary sprinkler and fire prevention system for the protection of said berth and shed, but, other than as herein expressly admitted, denies, generally and specifically, each and every allegation in said paragraph contained.

VI.

Answering Paragraph VI of the Amended Complaint herein, defendant admits that on or about the 12th day of March, 1956, a quantity of water escaped from said pipe into said shed, which said quantity of water wet certain merchandise lodged therein, but other than as herein expressly admitted, denies, generally and specifically, each and every allegation in said paragraph contained.

VII.

Answering Paragraph VII of the Amended Complaint herein, [8] defendant denies, generally and

specifically, each and every allegation therein contained.

VIII.

Answering Paragraph VIII of the Amended Complaint herein, defendant admits the allegations therein contained.

IX.

Answering Paragraph IX of the Amended Complaint herein, defendant alleges that all and singular the premises in this Answer set forth are true and admits the jurisdiction of this Honorable Court.

For a Second, Separate and Distinct Answer and Defense to the Amended Complaint on file herein, defendant City of Los Angeles admits, denies and alleges as follows:

I.

Repeats the allegations contained in Paragraphs I through IX of the First Answer and Defense herein, and incorporates the same by reference as though said allegations were herein set forth in full.

II.

That at all times herein mentioned, defendant is and was a Municipal Corporation of the State of California, organized and operating under a Freeholders' Charter adopted under the provisions of Section 8, Article XI, Constitution of said State.

III.

That the Board of Harbor Commissioners of the City of Los Angeles is the duly constituted au-

thority having jurisdiction, superintendence and control, under the provisions of said Charter, of the Harbor Department, a branch of the government of said City of Los Angeles, and the lands and transit shed at Los Angeles Harbor located at Berth 59, hereinafter mentioned. [9]

IV.

That pursuant to the authority vested in defendant and said Board of Harbor Commissioners by said Charter, defendant has adopted its Port of Los Angeles Tariff No. 3, enacting rules and regulations at Los Angeles Harbor for Wharf storage, berth assignments and cargo handling, covering shippers, handlers, exporters and importers of cargo transiting its berths and transit sheds, including said Berth 59 and the shed located thereat; that said Tariff was enacted by Order No. 2365 of said Board of Harbor Commissioners, adopted August 30, 1950, as amended, and approved by Ordinance No. 97,629 of the City of Los Angeles, adopted January 24, 1951, as amended, and was in full force and effect on the 12th day of March, 1956, at the time of the loss or damage herein complained of, and was pertinent to and binding upon all parties to this action; that at all times mentioned herein and for a long time prior thereto plaintiff had actual notice of said Tariff, including the provision hereinafter alleged as Item 535(b) thereof.

V.

That said Tariff provides, in Item 535 thereof, as follows:

“(b) Neither the Board nor the City shall be responsible or liable in any manner or degree for any loss or damage to any merchandise or other property of any description stored, handled, used, kept or placed upon, over, in, through, or under any wharf or other structure or property owned, controlled or operated by the Board or the City occasioned by or on account of pilferage, rodents, insects, natural shrinkage, wastage, decay, seepage, leaky containers, heating, evaporation, fire, leakage or discharge from sprinkler system, rain, floods, or the elements, collapse of a wharf or other structure, war, riots, strikes, or from any cause whatsoever, except to the extent that responsibility and liability shall be, regardless of the above limitations, absolutely imposed by [10] operation of law.”

VI.

That plaintiff, Grace & Co. (Pacific Coast), a corporation, was, at the time and place of the loss or damage alleged, a party to and governed by said Item 535(b) of Port of Los Angeles Tariff No. 3, and by reason of the provisions thereof hereinabove set forth defendant City of Los Angeles was and is absolved of and from any and all liability arising out of the alleged loss or damage to said or any goods or merchandise located in said transit shed at said Berth 59 which is alleged to have resulted from water which escaped from said pipe and sprinkler system on or about March 12, 1956.

For a Third, Separate and Distinct Answer and Defense, defendant City of Los Angeles alleges:

I.

Repeats the allegations contained in Paragraphs I through IX of the First Answer and Defense herein, and in Paragraphs I through VI of the Second Answer and Defense herein, and incorporates the same by reference as though said allegations were herein set forth in full.

II.

That on or about November 23, 1946, and extending to and including March 12, 1956, and continuing thereafter, plaintiff's parent company, and/or subsidiary, Grace Line, Inc., was preferential assignee of said Berth 59, including the transit shed located thereon, under an instrument in writing designated as Preferential Berth Assignment No. 105, by the Harbor Department, City of Los Angeles, accepted by said Grace Line, Inc., executed by F. L. Doelker, Vice President of said Company, dated January 3, 1946, by which acceptance said grantee agreed to be bound by and to observe each and every of the terms thereof; that by the provisions of said [11] Berth Assignment said Grace Line, Inc., agreed, in Paragraph 4 thereof:

"That this assignment and privileges hereby granted shall at all times be subject to the charter of the City of Los Angeles and to the orders, rules and regulations of the Board of Harbor Commis-

sioners and the ordinances of said city adopted in pursuance of said charter.”

III.

That said Grace Line, Inc., at the time and place of the loss or damage herein complained of, was the alter ego and/or agent of the plaintiff herein, and that by reason of the provisions and agreements contained in said Preferential Berth Assignment No. 105, effective November 23, 1946, and extending to and including March 12, 1956, and continuing thereafter, plaintiff was and is bound by each and every of the terms and provisions of said Preferential Berth Assignment No. 105 and of the provisions of Port of Los Angeles Tariff No. 3 and Item 535(b) thereof.

For a Fourth, Separate and Distinct Answer and Defense, defendant City of Los Angeles alleges:

I.

Repeats the allegations contained in Paragraphs I through IX of the First Answer and Defense herein, and incorporates the same by reference as though said allegations were herein set forth in full.

II.

That plaintiff did not exercise ordinary care, caution or prudence in the premises to avoid said occurrence or for the safety of its said goods and merchandise, in that plaintiff failed and neglected to maintain an adequate or any watch at the time and place alleged or at all, for the purpose of pro-

tecting said goods and merchandise or warning defendant of any such sprinkler leakage [12] or quantity of water entering said shed, and thereby affording defendant an opportunity to remedy said condition and/or minimize the damages to plaintiff's goods arising therefrom.

For a Fifth, Separate and Distinct Defense and Answer, defendant City of Los Angeles alleges:

I.

Repeats the allegations contained in Paragraphs I through IX of the First Answer and Defense herein, and incorporates the same by reference as though said allegations were herein set forth in full.

II.

That the alleged occurrence mentioned in plaintiff's Amended Complaint was the result of an inevitable and unavoidable accident insofar as this answering defendant is concerned.

For a Sixth, Separate and Distinct Defense and Answer, defendant City of Los Angeles alleges:

I.

Repeats the allegations contained in Paragraphs I through IX of the First Answer and Defense herein, and incorporates the same by reference as though said allegations were herein set forth in full.

II.

That the water pipe located beneath said shed, as alleged, was maintained by defendant in its govern-

mental capacity as a part of its fire prevention system, and defendant denies that said or any defective or dangerous condition was present prior to March 12, 1956, or was known to any officers or employees of defendant who possessed or had authority to remedy the same, or otherwise. Denies that any of said officers or employees of defendant had a reasonable or any time after notice thereof or otherwise to remedy [13] said condition, and denies that said or any of such officers or employees, after acquiring such knowledge and notice, failed and neglected to remedy said condition, and/or failed and neglected to take action reasonable or necessary to protect said goods against any such water damage; and denies, generally and specifically, any knowledge or notice of any such dangerous or defective condition that may have existed on or about said premises prior to the alleged loss or damage.

For a Seventh, Separate and Distinct Answer and Defense, defendant City of Los Angeles alleges:

I.

Repeats the allegations contained in Paragraphs I through IX of the First Answer and Defense herein, and incorporates the same by reference as though said allegations were herein set forth in full.

II.

That the cause of action alleged in the Amended Complaint herein is barred by the provisions of Section 53051 of the Government Code of the State

of California, in that the defendant City of Los Angeles is a local agency and the alleged dangerous and defective condition is alleged to have existed on public property; that said defendant is not liable for injuries to property resulting from a dangerous or defective condition of public property under the circumstances alleged for the following reasons:

(a) Said defendant had no prior knowledge or notice of the defective or dangerous condition alleged;

(b) Said defendant had no opportunity, for a reasonable time or otherwise, after acquiring said knowledge or receiving said notice, to remedy said alleged condition or take action reasonably necessary to protect plaintiff against said condition. [14]

Wherefore, defendant prays that plaintiff take nothing by its Amended Complaint herein, and that defendant City of Los Angeles be dismissed hence with its cost herein incurred, and for such other and further relief as this Court may deem meet and just.

ROGER ARNEBERGH,
City Attorney;

ARTHUR W. NORDSTROM,
Assistant;

C. N. PERKINS,
Deputy.

By /s/ C. N. PERKINS,
Attorneys for Defendant,
City of Los Angeles.

TRIPPET, YOAKUM,
STEARNS & BALLANTYNE,

By /s/ F. B. YOAKUM, JR.,
Of Council for Defendant,
City of Los Angeles.

Duly verified.

Receipt of copy acknowledged.

[Endorsed]: Filed December 6, 1956. [15]

[Title of District Court and Cause.]

Civil No. 20624-HW

ANSWERS TO INTERROGATORIES PRO-
POUNDED TO DEFENDANT CITY OF
LOS ANGELES BY PLAINTIFF

State of California,
County of Los Angeles—ss.

E. V. Dockweiler, having been duly sworn, deposes and says: That he is Harbor Engineer of The City of Los Angeles, a municipal corporation, one of the defendants herein; that from information obtained from personal knowledge and investigation, reports of subordinate employees acting under his supervision, and records and files in his custody kept in the regular course of business, he makes the following Answers to Interrogatories propounded to said defendant by the plaintiff in the above-entitled case: [17]

Interrogatory No. I.

“(a). State whether or not the City of Los Angeles owned Berth 59, Pier 1, Los Angeles Harbor, together with the buildings situate at said Berth 59, on or about March 12, 1956.

“(b). State whether or not the City of Los Angeles maintained and kept in repair the facility of said Berth 59, including any and all water piping beneath said Berth 59, on or about March 12, 1956.

“(c). If any person other than the City of Los Angeles maintained said berth, including said water piping, on or about March 12, 1956, state who said person was, what the work done by said person was, and whether or not said work was done under contract with the City of Los Angeles.”

Answer to Interrogatory No. I.

(a). Yes, the City of Los Angeles owned Berth 59, Pier 1, at Los Angeles Harbor, together with the buildings situate at said Berth 59, on or about March 12, 1956.

(b). Yes, the City of Los Angeles maintained and kept in repair the facility of said Berth 59, including any and all water piping beneath said Berth 59, on or about March 12, 1956, at such times and in such places as it became aware that such maintenance work was necessary in order to keep said water piping in good operating condition; such maintenance does not include digging up paving in order to inspect underground piping beneath buildings in order to determine the condition of

water piping located thereat unless water is found above ground, indicating evidence of a possible leak in the piping installed below ground.

(c). No person, firm or corporation other than the City of Los Angeles maintained said berth, including said water piping, on or about March 12, 1956. [18]

Interrogatory No. II.

“(a). State whether or not the warehouse or shed upon said Berth 59, including the foundation and the substructure of the same, was erected by the City of Los Angeles.

“(b). If the said structure was erected by any other person under contract to the City of Los Angeles, state who said person is.

“(c). State whether or not the City of Los Angeles has in its possession the plans or blueprints of said Berth 59, including:

“1. Plans of the foundation and substructure of said Berth 59, including specifications as to fill, if any; and

“2. Plans of any and all piping beneath said Berth 59.”

Answer to Interrogatory No. II.

(a). The transit shed located at said Berth 59, including the foundation and the substructure of the same, was erected by the Harbor Department of the City of Los Angeles.

(b). The transit shed at Berth 59, including the foundation and substructure of the same, was erected by the City of Los Angeles; certain parts of the construction work were performed by subcontractors, such as the paving on the wharf by Griffith and Company; the material for the exterior walls of the transit shed by Johns-Manville Company; the wharf and shed footings, including the bulkhead, anchors, riprap, and foundation were erected by Snare and Tviest, contractors; steel work was erected by Llewellyn Iron Works, contractors. No records are available indicating the identity of the contractors who made the earth fill or who poured the concrete floor slab. The original flooring in the transit shed was of timber construction which was replaced with a concrete floor slab poured in black iron mesh, laid on top of a compacted earth fill. [19]

(c). 1. Plans of the foundation and substructure of said Berth 59, numbered 1263 and 1170-B, are available and blueprints of the same will be supplied upon request.

2. Plans of piping beneath the transit shed at Berth 59, including plans of the sprinkler system supplying said shed, numbered 6211 and 1340, are available and will be supplied upon request.

Interrogatory No. III.

“(a). State when said Berth 59 was originally constructed.

“(b). State whether or not any alterations have since been made in said Berth 59, including altera-

tions as to the foundation and the piping beneath said Berth 59.

“(c). State whether the City of Los Angeles has plans and blueprints for any and all such changes.”

Answer to Interrogatory No. III.

(a). Berth 59 was originally constructed during or about the year 1914.

(b). No alterations have been made in said Berth 59 to the foundation or the piping beneath said berth since the transit shed located thereon was first constructed, except as noted in II (b).

(c). No plans or blueprints of any changes are in the possession of the City of Los Angeles, nor are any plans available for the concrete slab floor.

Interrogatory No. IV.

“(a). (1). State whether or not the floor of the warehouse of said Berth 59 consists of concrete without reinforcing, and approximately 6 inches thick.

“(2). If the floor is otherwise constructed, describe said construction.

“(3). State for what loading, including ‘live’ and ‘dead’ loads, the floor was designed. [20]

“(b). State whether or not said floor slab is supported by a compacted dirt fill contained be-

tween a retaining wall on the water side of said berth and a retaining wall on the landward side.

“(c). State from where the dirt which was used for any fill beneath the floor of said Berth 59 was obtained.”

Answer to Interrogatory No. IV.

(a). (1). The floor of the transit shed at said Berth 59 consists of concrete reinforced with standard black iron mesh, and said floor is approximately six inches thick.

(2). The floor was not otherwise constructed as of March 12, 1956, except for minor repairs made with bitumastic concrete.

(3). The floor was designed for 400 pounds per square foot loading, including both “live” and “dead” loads.

(b). Said floor slab is supported by a compacted dirt fill to a depth of four to five feet contained between a concrete sheet pile bulkhead wall on the water side of said berth and a standard concrete retaining wall on the land side.

(c). The original source of this dirt fill is unknown and is not designated in Harbor Department records.

Interrogatory No. V.

“(a). (1). State whether or not on or about March 12, 1956, a quantity of water escaped from a water pipe beneath said Berth 59.

“(b). State whether or not said water reached the surface of the floor, and damaged commodities then in the shed at said Berth 59.

“(c). State fully how, so far as the City knows, said water escaped from said pipe.

“(d). State fully in what manner the water from said pipe reached the surface of said floor. [21]

“(e). State whether or not a portion of the floor of said shed collapsed following the escape of said water.

“(f). State in what manner the escape of said water brought about the failure of said floor.

“(g). State the degree, if any, to which said pipe was corroded at the time of failure.

“(h). State the material of which said pipe was made, the method of manufacture, the thickness of its wall at the time of manufacture, the place of manufacture, and the date of installation.

“(i). State the depth of the top of the said pipe below the top of the floor of said berth.”

Answer to Interrogatory No. V.

(a). Yes, water was reported to Harbor Department representatives leaking beneath the platform on the land side of the shed, at or about 6:00 a.m. March 12, 1956, and the water pipe beneath the transit shed was shut off at or about 6:45 a.m.

(b). Yes, at the time Harbor Department maintenance men arrived at the shed water had reached

the surface of the floor and had wet commodities then in the shed at said Berth 59.

(c). The pipe beneath the loading platform on the land side under paving and approximately eight or nine feet below the level of the transit shed floor and outside the shed burst and water escaped therefrom.

(d). The water was forced up through the dirt fill under the loading dock floor and apparently through an opening between the loading dock floor and the transit shed foundation inside the building, some of the water flowing out over the top of the loading dock into the street and some of the water flowing down into the center of the transit shed floor.

(e). Yes, an area approximately 20 by 40 feet of the shed floor collapsed. [22]

(f). The water undermined the dirt fill, and after the water had been shut off and some time had elapsed, the surface of the floor collapsed and dropped approximately four to six feet, apparently due to the weight of cargo and traffic over it.

(g). The hole through which water escaped from the pipe covered an area about as big as an average man's hand.

(h). Said pipe was standard cast iron bell and spigot, eight-inch water pipe, thickness of wall approximately 9/16", place of manufacture unknown, installed about the year 1914.

(i). The pipe was installed approximately seven to eight feet below the surface of the floor of said berth.

Interrogatory No. VI.

“(a). State whether or not any report was made to the City with respect to the said failure.

“(b). If any such report was made, describe the same fully, giving the name of the person making the report, the name of the person to whom it was made, and the date of the report, and state whether these reports were in writing.”

Answer to Interrogatory No. VI.

(a). Report was made to Harbor Department plumber foreman by telephone from Harbor Department Supply Yard watchman.

(b). The name of the watchman making the report was Marvin F. Williams. The name of the person to whom the report was made was C. V. H. Brashier, plumber foreman, and the date of the report was March 12, 1956. These reports were made by telephone.

Interrogatory No. VII.

“(a). Describe the manner in which the pipe was repaired, or replaced, after the failure of the pipe referred to in plaintiff's complaint.

“(b). Give the names of each and every person participating in the removal of the section of pipe

from which the water [23] escaped and the repair or replacement thereof."

Answer to Interrogatory No. VII.

(a). A necessary length of pipe was cut off and replaced with new cast iron pipe after the occurrence of March 12, 1956, referred to in plaintiff's Complaint.

(b). The names of each and every person participating in the removal of the section of pipe from which the water escaped and the repair and replacement thereof are as follow. T. Bilich, C. Cope, V. Cosgro, B. David, H. Freese, G. Haworth, W. Horton, F. Huerta, C. Mellor, J. Moreno, E. Parsons, D. Pence, R. Sinden, E. Stephens, H. Thomas, J. Ward, L. Samson, C. Brashier, H. J. Smith, J. Hanna, F. Pietrzak and R. Witt.

Interrogatory No. VIII.

"(a). Describe fully any method, plan, or system of maintenance, inspection, and repair which the City had in effect as respects said pipe, prior to the escape of said water from said pipe. Give names of all persons inspecting.

"(b). If any reports were made incident to said inspection, give the dates of said reports, and the persons to whom said reports were made."

Answer to Interrogatory No. VIII.

(a). No inspection of the underground piping was made until some trouble was reported or some

evidence of leakage developed, in view of the fact that this particular pipe was installed some eight feet below the surface of a concrete slab floor in use and it was impractical to break through the same.

(b). There was no underground inspection made of the piping in this transit shed, and no reports were made except where evidence of leakage occurred.

Interrogatory No. IX.

“(a). State the uses to which the water in said pipe are put. [24]

“(b). State the static head of water in said pipe in feet or in pounds per square inch when there was no flow of water in said pipe.

“(c). State the maximum internal pressure to which said pipe might at any time have been subjected, including pressure of water hammer.

“(d). State whether or not the water from said pipe was being drawn at any point within the 24 hours prior to failure of said pipe.

“(e). State whether or not the flow of water in said pipe was shut off at any time in the 24 hours of said failure, giving the time and occasion of said shutoff.

“(f). State the maximum rate of flow of water in said pipe at any time in gallons or cubic feet per minute.”

Answer to Interrogatory No. IX.

(a). Fire prevention only. This pipe provided water to the sprinkler system in the transit shed only.

(b). The static head of water in said pipe was the normal Los Angeles Water Department pressure in said area, which was approximately 65 pounds per square inch.

(c). The maximum internal pressure to which said pipe would be subjected at any time would be the normal Los Angeles Water Department pressure; the shutoff valves in the system were slow moving, hand operated valves, and the air entrained in the system would have prevented any water hammer effect from occurring.

(d). No water was drawn at any point from said system within 24 hours prior to the occurrence of March 12, 1956, as far as is known.

(e). The flow of water in said pipe was not shut off at any time within 24 hours prior to the occurrence of March 12, 1956, as far as is known, with the exception of the shutoff which [25] occurred at or about 6:45 a.m. March 12, 1956, after the leakage complained of.

(f). Under a pressure of 65 pounds per square inch, the rate of flow is approximately 20,000 gallons per minute.

Interrogatory No. X.

“(a). State what, if any, methods were used

to ascertain at any time whether or not there was leakage from said pipe."

Answer to Interrogatory No. X.

(a). None, previous to the break. An inspection would only be made where surface water was apparent.

Interrogatory No. XI.

"(a). State what disposition was made of the section of pipe referred to following removal of such damaged section, if any, from said shed.

"(b). State whether said damaged section of pipe was marked in any way.

"(c). State where said damaged section of pipe is being kept at the present time.

"(d). State in whose charge said damaged section of pipe was placed and in whose custody it now is."

Answer to Interrogatory No. XI.

(a). The pipe referred to was removed to the Harbor Department Supply Yard, Berth 161, where photographs were taken, and the pipe is now retained for further reference at the same location. Prints of the photographs are available upon request.

(b). The section of the damaged pipe was marked with crayon at the time it was cut out, for reference only.

(c). At the Los Angeles Harbor Department Supply Yard, Berth 161, Wilmington.

(d). The damaged section of pipe is in the custody of C. V. H. Brashier, plumber foreman. [26]

Interrogatory No. XII.

“(a). State whether or not the City has at any time made any alterations of the soil in which said pipe was placed, as respects the corrosivity of said soil and for what purpose.

“(b). If such an alteration was made, state by whom it was made and the date, and what was its effect.”

Answer to Interrogatory No. XII.

(a). There have been no alterations of the soil in which the pipe was placed, as far as is known.

(b). No alteration was made.

Interrogatory No. XIII.

“(a). State whether or not the pipe in question was made of cast iron.

“(b). If the answer to (a) is ‘Yes,’ state whether or not the City has experienced failure of cast iron pipes by reason of corrosion in any past occasions.”

Answer to Interrogatory No. XIII.

(a). The pipe was made of ordinary cast iron.

(b). The Harbor Department has experienced, infrequently, some failure of cast iron pipes, as well as steel pipes, and wherever such failure has been experienced replacement has been made as the condition was discovered.

Interrogatory No. XIV.

“(a). State the number of occasions on which the City has experienced failure of cast iron pipes due to corrosion:

1. Within 5 years or less after installation of such pipes,
2. Within 5 to 10 years after installation of such pipes, and
3. Within 10 to 20 years after installation of such pipes.

“(b). Give the date and place of each instance of a failure of [27] cast iron pipe in the City of Los Angeles within the past 10 years, giving in each instance the cause of said failure, and the date and place thereof, the date of the installation of the pipe, the soil corrosivity or resistivity, the type of soil, the diameter class and method of manufacture of the pipe.”

Answer to Interrogatory No. XIV.

(a). The number of occasions on which the City of Los Angeles Harbor Department has experienced failure of cast iron water pipes due to corrosion,

prior to March 12, 1956, and within the times hereinafter mentioned, are as follows:

1. Within five years or less after installation of such pipes—none, so far as is known.
2. Within five to ten years after installation of such pipes—none, so far as is known.
3. Within ten to twenty years after installation of such pipes—two specific instances, one approximately fourteen years and the other approximately fifteen years after installation, so far as is known.

There is a great deal of cast iron water pipe installed in the ground serving Harbor Department properties which has been in service continuously since 1914 or thereabouts, without any apparent failure.

(b). The only instances of failure of cast iron water pipe installed by the Harbor Department and serving its properties within the past ten years prior to the occurrence of March 12, 1956, so far as is known, are as follows:

On February 15, 1954, a section of five-inch cast iron bell and spigot water pipe was replaced, due to corrosion, at Berth 60. On October 11, 1955, a section of eight-inch cast iron bell and spigot water pipe was repaired, due to corrosion, at Berth 59. [28]

There is no record of the method of manufacture of these pipes, nor was any test made to determine the corrosivity or resistivity, or the type of soil, so far as is known.

Interrogatory No. XV.

“(a). State whether the City made any effort to ascertain the reasonable life to be anticipated of the pipe beneath Berth 59.

“(b). If the answer to (a) is ‘Yes,’ state by whom said effort was made, what the estimated life calculated was, whether any written records exists of said estimate, and when said estimate was made, and what the estimate was.”

Answer to Interrogatory No. XV.

(a). No effort to ascertain the reasonable life of the pipe installed beneath Berth 59 was made, nor is any effort made to ascertain the reasonable life of any other cast iron pipe installed in the ground on Harbor Department lands, because it is impractical to dig up such pipe for inspection.

(b). No estimate is made of the life of such pipe, and no written records exist on the subject as far as is known.

Interrogatory No. XVI.

“(a). Does the City have any maps of the City of Los Angeles or any parts thereof indicating the corrosivity of soils with respect to the various areas in the City?

“(b). If the answer to (a) is ‘Yes,’ state in whose custody said maps or reports thereof are.

“Attach copy of maps to answers to interrogatories.

“(c). Does the City have records of underground cast iron pipe failures which show size and class of pipe, location, dates of installation and of failure, type of soil and soil resistivity or corrosivity, or any of the above?

“(d). If the answer to (c) is ‘Yes,’ state in whose custody said records are kept.” [29]

Answer to Interrogatory No. XVI.

(a). No maps of the Harbor Department properties of the City of Los Angeles indicate the corrosivity of the soil, so far as is known.

(b). No person has custody of any such maps, nor are any copies of same available, so far as is known.

(c). No records of underground cast iron pipe failure, showing the size and class of pipe, location, dates of failure, type of soil, and soil resistivity or corrosivity are kept by the Harbor Department.

(d). No one has custody of such records.

Interrogatory No. XVII.

“(a). State whether or not the City has in its employ engineers who are experts with respect to corrosion of piping.

(b). If the City has such experts in its employ, state whether or not their services were used in any way in determining the reasonable life of the piping in question.”

Answer to Interrogatory No. XVII.

(a). The Harbor Department has a testing engineer, C. M. Wakeman, who tests materials for strength and other qualities, which are used in Harbor Department construction projects.

(b). No records are available indicating that the services of a testing engineer were used in any way in determining the reasonable life of the cast iron pipe in question laid underground at Berth 59 at or about the year 1914.

/s/ E. V. DOCKWEILER.

Subscribed and sworn to before me this 14th day of January, 1957.

[Seal] /s/ LILLIAN B. KINZY,
Notary Public in and for the County of Los Angeles,
State of California.

Respectfully submitted,

ROGER ARNEBERGH,
City Attorney;

ARTHUR W. NORDSTROM,
Assistant;

C. N. PERKINS,
Deputy;

By /s/ C. N. PERKINS,
Attorneys for Defendant
City of Los Angeles.

TRIPPET, YOAKUM,
STEARNS & BALLANTYNE.

By /s/ F. B. YOAKUM, JR.,
Of Counsel for Defendant
City of Los Angeles.

Receipt of copy acknowledged.

[Endorsed]: Filed January 15, 1957. [30]

[Title of District Court and Cause.]

ADDITIONAL ANSWERS TO INTERROGA-
TORIES NUMBERED VIII, XIII, XIV,
XVI AND XVII, SUBMITTED BY DE-
FENDANT CITY OF LOS ANGELES AS
REQUIRED BY COURT ORDER MADE
FEBRUARY 25, 1957

I.

State of California,
County of Los Angeles—ss.

E. V. Dockweiler, having been duly sworn, de-
poses and says: That he is Chief Harbor Engineer
of the City of Los Angeles, a municipal corpora-
tion, one of the defendants herein; that from infor-
mation obtained from personal knowledge and in-
vestigation, reports of subordinate employees act-
ing under his supervision, and records and files in
his custody and kept in the regular course of busi-
ness, he makes the following additional answer to
Interrogatory No. VIII, in conformity with the

first requirement of Court Order made February 25, 1957, which recites: [32]

“First: Respecting plaintiff’s Interrogatory No. 8, the defendant The City of Los Angeles is required to give the dates of any reports made where evidence of a leakage occurred as to piping in the transit shed referred to in the defendant’s answer to plaintiff’s said Interrogatory No. 8, and to give the name of the person to whom said report was made.”

Answer to First Requirement.

The dates of any reports made where evidence of a leakage in the transit shed referred to in defendant’s Answer to Plaintiff’s Interrogatory No. VIII, and the name of the person to whom said report was made, are as follows: No leakage due to corrosion or otherwise was ever reported prior to the escape of said water from said pipe, in said pipe or in other piping inside the transit shed referred to at Berth 59. The date and the names of the persons making and receiving the report on the leakage which occurred March 12, 1956, are given in the Answer to Interrogatory No. VI.

Upon further investigation and study of Harbor Department records, affiant finds himself to have been in error with respect to incidents of prior leakage given in his Answer to Interrogatory No. XIV (b) heretofore made as follows: “On February 15, 1954, a section of five-inch cast iron bell and spigot water pipe was replaced, due to corrosion, at Berth

60. On October 11, 1955, a section of eight-inch cast iron bell and spigot water pipe was repaired, due to corrosion, at Berth 59."

Affiant now corrects said answer quoted above to read as follows: On February 15, 1954, a section of five-inch cast iron bell and spigot water pipe inside the transit shed at Berth 60, which shed is separated by a concrete fire wall and driveway from the transit shed at Berth 59, was repaired due to a straight sheer from an unknown cause. This break was not due to corrosion. The transit shed at Berth 60 was empty at the time and no cargo damage [33] occurred. No record of a report of leakage has been found in Harbor Department files. The broken pipe was repaired with a split sleeve at a time when a bulkhead within the said transit shed was undergoing repair. On October 11, 1955, at 4:15 p.m., Harbor Department plumber Dale Pence was notified by telephone by Margaret Reynolds, secretary in the Operating Division, of a water leak at Berth 59 in the street outside the transit shed opposite Door 25. On October 13, 1955, the leak, due to a broken leaded joint, was repaired. This leak was not caused by corrosion. No water damage occurred in the transit shed at Berth 59 at said time.

E. V. DOCKWEILER.

Subscribed and sworn to before me this 21st day of June, 1957.

[Seal] /s/ LILLIAN B. KINZY,
Notary Public in and for the County of Los Angeles,
State of California.

II.

State of California,
County of Los Angeles—ss.

Robert R. Ashline, having been duly sworn, deposes and says: That he is Corrosion Engineer of the Water System of the Department of Water and Power of the City of Los Angeles, a municipal corporation, one of the defendants herein; that from information obtained from personal knowledge and investigation, reports of subordinate employees and office associates acting under his supervision, and records and files in his custody kept in the regular course of business, he makes the following additional answers to Interrogatories Nos. XIII, XIV, XVI, and XVII, in conformity with the second requirement of the Court Order made February 25, 1957, which recites: [34]

“Second: Defendant is required to answer plaintiff’s Interrogatories numbered 13, 14, 16 and 17, and to answer said interrogatories with respect to The City of Los Angeles in all its departments, rather than confining said answers to the Harbor Department. The answers of The City of Los Angeles to such of said interrogatories as refer to the experiences of the City respecting pipe may be confined to the experience of The City of Los Angeles within one (1) mile of the waterfront of Los Angeles Harbor.”

Interrogatory No. XIII.

“(b) * * * state whether or not the City has experienced failure of cast iron pipes by reason of corrosion in any past occasions.”

Answer.

The Water System of the Department of Water and Power, the only other agency of the City of Los Angeles having jurisdiction and control over underground pipe installations in the area within one mile inland of the pierhead lines established by the Federal Government at Los Angeles Harbor, has experienced failures of cast iron pipes due to corrosion as follows:

Schedule A

Main	St.	Main Size	Location	Main Install.	Date of Fail.	Type of Break	Corrosion Index
Within 1-5 Years After Installation							
None							
Within 6-10 Years After Installation							
10th	St.	6" C.I.	30' WW Mesa St.	1931	1939	Corrosion	None
22nd	St.	8" C.I.	62' W Outer St.	1934	1940	Corrosion	Severe
22nd	St.	8" C.I.	26' W Outer St.	1934	1941	Corrosion	Severe
22nd	St.	8" C.I.	43' W Outer St.	1934	1941	Corrosion	Severe
22nd	St.	8" C.I.	255' W Outer St.	1934	1941	Corrosion	Severe
22nd	St.	8" C.I.	266' W Outer St.	1934	1941	Corrosion	Severe
22nd	St.	8" C.I.	158' W Outer St.	1934	1942	Corrosion	Severe
Bluff	Pl.	4" C.I.	35' No 38th St.	1932	1940	Corrosion	Severe
Ocean	Ave.	8" C.I.	Int. of Herne Pl.	1930	1940	Corrosion	Mild
Within 11-20 Years After Installation							
13th	St.	6" C.I.	165' EE Cabrillo Ave.	1925	1945	Corrosion	Severe
36th	St.	6" C.I.	13' WW Peck Ave.	1923	1942	Corrosion	Severe
36th	St.	6" C.I.	100' W Peck Ave.	1923	1943	Corrosion	Severe
37th	St.	4" C.I.	340' W Pacific Ave.	1922	1941	Corrosion	Severe
Alameda	St.	6" C.I.	38' S/o Grant St.	1925	1941	Corrosion	None
Alma	St.	6" C.I.	45' N/o 27th St.	1924	1939	Corrosion	Severe
Anaheim	St.	6" C.I.	17' EW Foote Ave.	1928	1947	Corrosion	None
Anaheim	St.	20" C.I.	65' W/o Neptune Ave.	1929	1940	Corrosion	Mild
Anaheim	St.	8" C.I.	652' E/o Sigsbee Ave.	1928	1946	Corrosion	None
Bandini	St.	6" C.I.	17' S/o Upland Ave.	1925	1940	Corrosion	None
Beacon	St.	6" C.I.	135' SS 16th St.	1924	1941	Corrosion	Severe
Beacon	St.	6" C.I.	60' SS 16th St.	1924	1941	Corrosion	Severe
Beacon	St.	6" C.I.	38' SS 16th St.	1924	1944	Corrosion	Severe
Beacon	St.	6" C.I.	39' S/o 15th St.	1924	1942	Corrosion	Severe
Beacon	St.	6" C.I.	35' S/o 14th St.	1924	1943	Corrosion	Severe
Beacon	St.	6" C.I.	97' N/o Crescent Ave.	1924	1939	Corrosion	Severe
Beacon	St.	6" C.I.	17' N/o Crescent Ave.	1924	1942	Corrosion	Severe
Bluff	Pl.	4" C.I.	66' N/o 38th St.	1932	1943	Corrosion	Severe
Cabrillo	St.	4" C.I.	167' NN 37th St.	1925	1942	Corrosion	Severe
Cabrillo	St.	6" C.I.	6' NS 15th St.	1924	1943	Corrosion	Severe
Emily	St.	4" C.I.	294' SS 36th St.	1926	1946	Corrosion	Severe
Frigate	Ave.	6" C.I.	17' N/o Grant St.	1925	1944	Corrosion	Severe
Gaffey	St.	8" C.I.	6' N/o 30th St.	1927	1940	Corrosion	Severe
Gulf	Ave.	6" C.I.	200' SS "C" St.	1927	1940	Corrosion	None
Marine	Ave.	6" C.I.	195' NN "A" St.	1925	1938	Corrosion	None
Marine	Ave.	6" C.I.	75' NN "A" St.	1925	1939	Corrosion	None
Peck	Ave.	6" C.I.	12' N/o 33rd St.	1927	1938	Corrosion	Severe
Summerland	Ave.	6" C.I.	119' E/o Leland St.	1925	1944	Corrosion	Severe
5th	St.	6" C.I.	500' W/o Gaffey St.	1937	1947	Corrosion	Severe

Interrogatory No. XIV.

“(a). State the number of occasions on which the City has experienced failure of cast iron pipes due to corrosion:

1. Within 5 years or less after installation of such pipes,

2. Within 5 to 10 years after installation of such pipes, and

3. Within 10 to 20 years after installation of such pipes.

“(b). Give the date and place of each instance of a failure of cast iron pipe in the City of Los Angeles within the past 10 years, giving in each instance the cause of said failure, and the date and place thereof, the date of the installation of the pipe, the soil corrosivity or resistivity, the type of soil, the diameter class and method of manufacture of the pipe.”

Answer.

(a). The number of occasions on which the Water System of the City of Los Angeles, Department of Water and Power, has experienced failure of cast iron pipe due to corrosion prior to March 12, 1956, and within the times and the one-mile area mentioned above, are as follows: (See Schedule A included as part of Answer to Interrogatory XIII (b), *supra*.)

1. Within five years or less after installation of such pipes: None, as far as is known.

2. Within six to ten years, inclusive, after the installation of such pipes: Nine breaks, as far as is known. [37]

3. Within 11 to 20 years, inclusive, after the installation of such pipes: 29 breaks, as far as is known.

(b). The date and place of each instance of a failure of cast iron water pipe installed by the Water and Power Department within the one-mile area mentioned above and within the years 1946 to and including 1956 (10 years prior to the occurrence of March 12, 1956), as far as is known, are as follows: [38]

Schedule B

Main	St.	Main Size	Location	Main Install.	Date of Fail	Type of Break	Corrosive Index
7th	St.	6" C.I.	40' W/o Gaffey St.	1913	1947	Corrosion	Severe
7th	St.	6" C.I.	36' W/o Gaffey St.	1913	1947	Split or Rupture	Severe
1st	St.	20" C.I.	78' WW Parker St.	1918	1955	Round Crack	Severe
7th	St.	6" C.I.	79' WW Gaffey St.	1913	1950	Rust Hole	Severe
8th	St.	4" C.I.	65' WW Cabrillo Ave.	1925	1949	Round Crack	Severe
8th	St.	4" C.I.	138' WW Cabrillo Ave.	1925	1951	Round Crack	Severe
10th	St.	6" C.I.	60' EE Pacific Ave.	1931	1949	Round Crack	Severe
11th	St.	6" C.I.	206' EE Cabrillo Ave.	1913	1954	Split	Severe
13th	St.	6" C.I.	22' EE Cabrillo Ave.	1925	1946	Split	Severe
13th	St.	6" C.I.	10' WE Cabrillo Ave.	1925	1949	Split	Severe
13th	St.	6" C.I.	33' WW Mesa St.	1925	1949	Split	Severe
14th	St.	6" C.I.	124' WW Cabrillo Ave.	1924	1947	Split	Severe
14th	St.	10" C.I.	44' EE Beacon St.	1914	1953	Ruptured	Severe
15th	St.	6" C.I.	24' W Centre St.	1924	1947	Round Crack	Severe
15th	St.	6" C.I.	230' EE Centre St.	1924	1953	Round Crack	Severe
15th	St.	6" C.I.	112' EE Mesa St.	1924	1952	Round Crack	Severe
16th	St.	6" C.I.	14' WW Beacon St.	1924	1953	Split	Severe
19th	St.	6" C.I.	62' EE Pacific Ave.	1923	1954	Ruptured	Severe
20th	St.	4" C.I.	26' EE Meyler St.	1926	1949	Round Crack	Severe
20th	St.	4" C.I.	315' WW Cabrillo Ave.	1926	1953	Round Crack	Severe
20th	St.	6" C.I.	40' EE Gaffey St.	1923	1950	Split	Severe
22nd	St.	6" C.I.	87' WW Meyler St.	1928	1950	Split	Severe
22nd	St.	6" C.I.	150' W Cabrillo Ave.	1928	1946	Round Crack	Severe
22nd	St.	6" C.I.	11' WE Alma St.	1928	1950	Round Crack	Severe
22nd	St.	6" C.I.	30' WE Alma St.	1928	1953	Round Crack	Severe
23rd	St.	6" C.I.	172' WW Cabrillo Ave.	1928	1949	Round Crack	Severe
26th	St.	6" C.I.	35' WW Alma St.	1924	1950	Round Crack	Severe
26th	St.	6" C.I.	167' WW Alma St.	1928	1947	Round Crack	Severe
26th	St.	4" C.I.	110' EE Gaffey St.	1927	1950	Corrosion	None
27th	St.	4" C.I.	66' EE Cabrillo St.	1927	1949	Round Crack	None
27th	St.	4" C.I.	135' EE Gaffey St.	1927	1955	Round Crack	None
27th	St.	6" C.I.	253' W Alma St.	1923	1946	Corrosion	Severe
27th	St.	4" C.I.	170' EN 28th St.	1924	1955	Round Crack	None
28th	St.	6" C.I.	72' WW Cabrillo Ave.	1928	1952	Ruptured	None
30th	St.	4" C.I.	20' EW Kerchoff Ave.	1916	1954	Split	Severe
30th	St.	4" C.I.	22' E Carolina St.	1915	1947	Corrosion	Severe
32nd	St.	4" C.I.	3' EW Kerchoff Ave.	1915	1949	Round Crack	Severe
32nd	St.	6" C.I.	27' EE Carolina St.	1915	1950	Eleet.	Severe
32nd	St.	6" C.I.	96' EE Gaffey St.	1927	1948	Split	Severe
37th	St.	6" C.I.	94' EE Gaffey St.	1927	1949	Split	Severe
37th	St.	4" C.I.	64' WW Pacific Ave.	1941	1953	Round Crack	Severe
37th	St.	4" C.I.	151' WW Carolina St.	1925	1951	Split	Severe
37th	St.	4" C.I.	75' WW Carolina St.	1925	1951	Split	Severe
38th	St.	4" C.I.	62' W Bluff Pl.	1916	1948	Round Crack	Severe
38th	St.	4" C.I.	50' WW Bluff Pl.	1916	1948	Ruptured	Severe
39th	St.	4" C.I.	50' EE Pacific Ave.	1921	1950	Corrosion	Severe
39th	St.	4" C.I.	160' EE Pacific Ave.	1921	1953	Ruptured	Severe
15th	St.	4" C.I.	98' W Carolina St.	1923	1946	Corrosion	Severe
38th	St.	6" C.I.	30' WW Palos Verdes St.	1924	1951	Rupture	Severe
38th	St.	4" C.I.	200' WW Carolina St.	1923	1950	Round Crack	Severe

Main	St.	Main Size	Location	Main Install.	Date of Fail.	Type of Break	Corrosive Index
39th	St.	4" C.I.	298' WW Carolina St.	1923	1949	Split	Severe
39th	St.	4" C.I.	150' WW Carolina St.	1923	1949	Split	Severe
39th	St.	4" C.I.	140' WW Carolina St.	1923	1949	Rupture	Severe
38th	St.	4" C.I.	100' WW Carolina St.	1922	1949	Rupture	Severe
6th	St.	C.I.	20' EW Palos Verdes St.	1932	1949	Joint	None
5th	St.	6" C.I.	206' WW Grand Ave.	1913	1948	Rupture	Severe
30th	St.	4" C.I.	18' WE Carolina St.	1915	1947	Round Crack	Severe
38th	St.	4" C.I.	42' WW Carolina St.	1922	1946	Rupture	Severe
Battery	St.	6" C.I.	35' EW Gaffey St.	1934	1952	Joint	Mild
Fries	Ave.	12" C.I.	234' SS "B" St.	1946	1952	Joint	Severe
Old Dock	St.	16" C.I.	117' WW Long Beach	1925	1952	Joint	None
Cabrillo	Ave.	6" C.I.	12' SN 6th St.	1923	1952	Joint	Severe
Old Dock	St.	16" C.I.	500' WW Henry Ford Ave.	1925	1952	Joint	None
"E"	St.	6" C.I.	97' EE Banning Blvd.	1937	1951	Joint	None
"B"	St.	20" C.I.	98' WW Wilmington Blvd.	1913	1951	Joint	Severe
Wilmington & San Pedro	Rd.	20" C.I.	3245' EE Battery St.	1913	1951	Joint	None
Summerland	Ave.	8" C.I.	89' WW Cabrillo Ave.	1933	1951	Joint	Severe
Old Dock	St.	16" C.I.	650' WW Henry Ford Ave.	1925	1951	Joint	None
1st	St.	8" C.I.	18' EW Gaffey St.	1923	1956	Split	Severe
9th	St.	6" C.I.	214' EE Cabrillo Ave.	1931	1956	Ruptured	Severe
37th	St.	6" C.I.	23' WE Parker St.	1925	1956	Split	Severe
4th	St.	6" C.I.	248' EE Cabrillo Ave.	1920	1956	Ruptured	Severe
38th	St.	4" C.I.	212' EE Pacific Ave.	1921	1956	Split	Severe
8th	St.	4" C.I.	60' WW Cabrillo Ave.	1930	1955	Round Crack	Severe
15th	St.	6" C.I.	29' EW Centre St.	1924	1955	Split	Severe
21st	St.	6" C.I.	134' EE Meyler St.	1928	1955	Ruptured	Severe
38th	St.	4" C.I.	167' EE Cabrillo Ave.	1927	1955	Round Crack	None
38th	St.	4" C.I.	18' EE Pacific Ave.	1914	1955	Ruptured	Severe
39th	St.	4" C.I.	60' EE Pacific Ave.	1914	1955	Ruptured	Severe
30th	St.	8" C.I.	147' EE Pacific Ave.	1921	1946	Ruptured	Severe
4th	St.	8" C.I.	17' WE Gaffey St.	1923	1954	Ruptured	Severe
Alma	St.	8" C.I.	365' WW Centre St.	1924	1953	Corrosion	None
Anaheim	St.	6" C.I.	98' SS 27th St.	1920	1953	Corrosion	Severe
Anaheim	St.	6" C.I.	17' EW Foote Ave.	1928	1947	Corrosion, Hole in Lateral	None
Anaheim	St.	8" C.I.	652' E/o Sigsbee Ave.	1928	1946	Corrosion	None
Anaheim	St.	8" C.I.	578' W/o Sigsbee Ave.	1933	1946	Round Crack	None
Anaheim	St.	8" C.I.	52' EE Schley Ave.	1928	1946	Split	None
Anaheim	St.	8" C.I.	87' WW Cushing Ave.	1928	1949	Split	None
Avalon	Blvd.	20" C.I.	140' SS "E" St.	1913	1953	Split	None
Bandini	St.	6" C.I.	80' S/o Upland Ave.	1925	1946	Round Crack	None
Barracuda	St.	4" C.I.	340' SS Bass St.	1936	1949	Round Crack	Slight
Broad	Ave.	6" C.I.	90' SS "B" St.	1928	1948	Rupture	Mild
Cabrillo	Ave.	4" C.I.	302' SS 36th St.	1925	1951	Round Crack	Severe
Cabrillo	Ave.	4" C.I.	27' NS 37th St.	1925	1952	Round Crack	Severe
Cabrillo	Ave.	4" C.I.	217' SS 36th St.	1925	1953	Round Crack	Severe
Cabrillo	Ave.	6" C.I.	5' NN 12th St.	1925	1951	Split	Severe
Cabrillo	Ave.	6" C.I.	50' NN 24th St.	1928	1953	Round Crack	None
Cabrillo	Ave.	6" C.I.	108' NN Elbeon Ave.	1927	1952	Split	Severe
Carolina	St.	4" C.I.	33' SS 32nd St.	1916	1952	Round Crack	Severe
Carolina	St.	6" C.I.	25' SN Shepard St.	1917	1949	Split or Rupture	Severe

Main	St.	Main Size	Location	Main Install.	Date of Failure	Type of Break	Consecutive Index
Carolina	St.	4" C.I.	22' NS 30th St.	1915	1947	Round Crack	Severe
Carolina	St.	4" C.I.	40' NN 31st St.	1915	1948	Round Crack	Severe
Carolina	St.	4" C.I.	5' SN Hamilton Pl.	1927	1949	Split or Rupture	Severe
Carolina	St.	4" C.I.	75' SS 27th St.	1915	1952	Split or Rupture	Severe
Carolina	St.	6" C.I.	115' NN 16th St.	1913	1951	Split	Severe
Cristobal	Ave.	6" C.I.	120' NN Opp St.	1926	1953	Split	None
"D"	St.	8" C.I.	75' WW Banning Blvd.	1930	1949	Round Crack	None
"D"	St.	8" C.I.	30' WE Lakme Ave.	1930	1951	Round Crack	None
"D"	St.	8" C.I.	40' WW McFarland Ave.	1930	1955	Round Crack	Severe
"D"	St.	8" C.I.	110' WW Dominguez St.	1930	1947	Split	Severe
"D"	St.	8" C.I.	62' WW Dominguez St.	1930	1949	Round Crack	Severe
"D"	St.	8" C.I.	138' WW Dominguez St.	1930	1950	Round Crack	Severe
"D"	St.	8" C.I.	155' EE Dominguez St.	1948	1950	Rupture	Severe
Denison	Ave.	4" C.I.	191' SS 34th St.	1924	1954	Split	Severe
Denison	Ave.	6" C.I.	228' SS 32nd St.	1924	1953	Split	Severe
Old Dock	St.	10" C.I.	647' WE Alkoona Pl. (Under R.R.)	1932	1954	Round Crack	Mild
Old Dock	St.	16" C.I.	450' WW Henry Ford Ave.	1925	1951	Split and Round Crack	None
Elberon	Ave.	4" C.I.	384' W/o Leland Ave.	1929	1946	Round Crack	Severe
Elberon	Ave.	4" C.I.	172' WW Gaffey Pl.	1926	1949	Round Crack	Severe
Elberon	Ave.	4" C.I.	153' WW Cabrillo Ave.	1926	1954	Split	Severe
Elberon	Ave.	4" C.I.	65' WW Leland St.	1925	1949	Round Crack	Severe
Elberon	Ave.	6" C.I.	6' WW Gaffey St.	1926	1952	Round Crack	Severe
Emily	Ave.	4" C.I.	294' SS 36th St.	1926	1946	Corrosion	Severe
"F"	St.	6" C.I.	45' EE McDonald Ave.	1926	1952	Split	Mild
Flint	Ave.	8" C.I.	94' SS "P" St.	1929	1952	Round Crack	Severe
Fries	Ave.	6" C.I.	10' SN "G" St.	1913	1951	Split	Moderate
Fries	Ave.	6" C.I.	150' NN "C" St.	1913	1951	Rupture	Severe
Front	St.	8" C.I.	64' SS Santa Cruz St.	1928	1954	Round Crack	Moderate
"G"	St.	6" C.I.	46' EE Sanford Ave.	1928	1954	Round Crack	None
"G"	St.	6" C.I.	19' WW Watson Ave.	1928	1949	Rupture	None
Gaffey	St.	8" C.I.	130' NN 34th St.	1927	1947	Split	Severe
Gaffey	St.	8" C.I.	15' NS 30th St.	1927	1954	Rupture	Severe
Gaffey	St.	20" C.I.	Under Gaffey St. Bridge	1936	1954	Split	Moderate
Gaffey	St.	6" C.I.	21' SS 23rd St.	1927	1950	Rupture	Severe
Gaffey	St.	6" C.I.	98' SS 23rd St.	1927	1952	Round Crack	None
Gaffey	St.	8" C.I.	18' NN 29th St.	1927	1954	Split	Severe
Gaffey	St.	8" C.I.	89' SS 26th St.	1927	1951	Rupture	Severe
Gaffey	St.	8" C.I.	68' NN 30th St.	1927	1953	Rupture	Severe
Gaffey	St.	8" C.I.	49' SS 38th St.	1927	1947	Split	Severe
Gaffey	St.	8" C.I.	13' SN 39th St.	1927	1952	Split or Rupture	Severe
Gulf	Ave.	6" C.I.	184' NN "B" St.	1927	1950	Split or Rupture	None
Gulf	Ave.	6" C.I.	120' NN "B" St.	1927	1950	Split	None
Gulf	Ave.	6" C.I.	215' NN "B" St.	1927	1950	Split or Rupture	None
Hamilton	Ave.	6" C.I.	22' EE Alma St.	1928	1952	Round Crack	Severe
Hamilton	Ave.	6" C.I.	50' EE Alma St.	1928	1954	Round Crack	Severe
Henry Ford	Ave.	16" C.I.	1400' ± S/o Anaheim St.	1925	1946	Corrosion	Severe
Henry Ford	Ave.	16" C.I.	700' SS Anaheim St.	1925	1949	Round Crack	Severe
Henry Ford	Ave.	16" C.I.	1100' SS Anaheim St.	1925	1950	Round Crack	Moderate
Leland	Ave.	4" C.I.	30' NS Elberon Ave.	1924	1951	Joint	Moderate
Leland	Ave.	4" C.I.	28' SS Elberon Ave.	1924	1954	Round Crack	Severe

Main	St.	Main Size	Location	Main Infill.	D.M. of Pit	Type of Break	Corrosive Index
Leland	Ave.	4" C.I.	159' SS 31st St.	1925	1948	Round Crack	Severe
MacDonough	Ave.	8" C.I.	200' SS Anaheim St.	1930	1952	Round Crack	Severe
MacDonough	Ave.	8" C.I.	529' SS Anaheim St.	1930	1954	Round Crack	Mild
Mesa	St.	6" C.I.	68' SS Amar St.	1928	1949	Round Crack	None
Meyler	St.	6" C.I.	91' N/o 18th St.	1928	1946	Round Crack	Severe
Meyler	St.	6" C.I.	20' SS 25th St.	1928	1950	Spilt and Round Crack	Severe
Meyler	St.	6" C.I.	78' NN 24th St.	1924	1951	Spilt and Round Crack	Severe
Meyler	St.	6" C.I.	68' SS 22nd St.	1928	1949	Round Crack	Severe
Meyler	St.	6" C.I.	13' SS 21st St.	1928	1949	Round Crack	Severe
Meyler	St.	6" C.I.	48' SS 19th St.	1928	1949	Round Crack	Severe
Meyler	St.	6" C.I.	116' SS 17th St.	1928	1953	Spilt	Severe
Meyler	St.	4" C.I.	297' SS 36th St.	1925	1949	Round Crack	Severe
Old Dock	St.	16" C.I.	500' WW Henry Ford St.	1925	1949	Round Crack	None
Old Dock	St.	16" C.I.	500' WW Henry Ford St.	1925	1951	Round Crack	None
Old Dock	St.	16" C.I.	285' WW Henry Ford St.	1925	1955	Round Crack	None
Old Dock	Rd.	10" C.I.	365' SS 14th St.	1914	1946	Spilt or Rupture	Severe
Outer Harbor	Ave.	6" C.I.	15' SN Shepard St.	1915	1946	Spilt	Severe
Pacific	Ave.	6" C.I.	7' SS Shepard St.	1915	1954	Spilt	Severe
Pacific	Ave.	6" C.I.	77' NN Shepard St.	1915	1954	Spilt	Severe
Pacific	Ave.	10" C.I.	253' NN 30th St.	1915	1954	Spilt or Rupture	None
Pacific	Ave.	10" C.I.	240' SS 30th St.	1915	1954	Spilt or Rupture	None
Pacific	St.	6" C.I.	67' NN 6th St.	1924	1948	Round Crack	None
Palos Verdes	St.	6" C.I.	66' NN 6th St.	1924	1949	Round Crack	None
Palos Verdes	St.	6" C.I.	5' SN 6th St.	1927	1955	Round Crack	Severe
Paraiso	Ave.	6" C.I.	40' SS 35th St.	1928	1953	Spilt	Severe
Peck	Ave.	6" C.I.	175' SS "I" St.	1928	1952	Spilt	None
Pioneer	Ave.	6" C.I.	175' SS "G" St.	1933	1951	Round Crack	None
Pioneer	Ave.	4" C.I.	286' NN 37th St.	1925	1949	Round Crack	Severe
Roxbury	Ave.	4" C.I.	34' SS 36th St.	1925	1949	Round Crack	Severe
Roxbury	St.	4" C.I.	189' SS 36th St.	1925	1954	Round Crack	Severe
Roxbury	St.	4" C.I.	3' NS 37th St.	1925	1954	Round Crack	Severe
Roxbury	St.	6" C.I.	5' EE Gaffey St.	1913	1955	Round Crack	Severe
Santa Cruz	St.	20" C.I.	210' WW Cabrillo Ave.	1924	1946	Round Crack	Severe
Santa Cruz	St.	4" C.I.	312' WW Gaffey St.	1919	1946	Spilt or Rupture	Severe
Santa Cruz	St.	4" C.I.	84' WW Gaffey St.	1919	1948	Spilt	Severe
Santa Cruz	St.	6" C.I.	5' SN Anaheim St.	1928	1946	Spilt or Rupture	None
Schley	Ave.	10" C.I.	210' SS Altoona Pl.	1922	1949	Round Crack	None
Seaside	St.	4" C.I.	305' EE Meyler St.	1919	1946	Round Crack	Severe
Seputveda	St.	4" C.I.	62' W/o Marshall Ct.	1919	1946	Rupture	Severe
Seputveda	St.	4" C.I.	194' WW Meyler St.	1919	1946	Spilt	Severe
Seputveda	St.	4" C.I.	19' WE Cabrillo Ave.	1919	1948	Round Crack	Severe
Seputveda	St.	4" C.I.	91' E/o Gaffey St.	1923	1947	Spilt	Severe
Shepard	St.	6" C.I.	309' WW Pacific Ave.	1923	1954	Round Crack	Severe
Shepard	St.	6" C.I.	70' WW Pacific Ave.	1915	1951	Spilt or Rupture	Severe
Shepard	St.	6" C.I.	61' WW Pacific Ave.	1915	1952	Spilt	Severe
Shepard	St.	4" C.I.	108' EE Gaffey St.	1923	1947	Spilt	Severe
Summerland	Ave.	6" C.I.	145' EE Bandini St.	1925	1947	Round Crack	Moderate
Summerland	Ave.	6" C.I.	154' EE Bandini St.	1925	1952	Round Crack	Moderate
Summerland	Ave.	6" C.I.	55' EE Bandini St.	1925	1950	Round Crack	Severe
Summerland	Ave.	6" C.I.	340' WW Bandini St.	1925	1948	Round Crack	Severe

Main	St.	Main Side	Location	Main Instalt.	Date of Fail.	Type of Break	Corrosive Index
Summerland	6" C.I. Ave.	6" C.I.	393' WW Bandini St.	1925	1950	Round Crack	Severe
Summerland	Ave.	6" C.I.	250' WW Bandini St.	1925	1953	Round Crack	Severe
Terminal Way		10" C.I.	168' WW Ways St.	1918	1953	Split	Slight
Watson	Ave.	6" C.I.	165' NN Opp St.	1927	1949	Round Crack	None
Leland	Ave.	4" C.I.	81' SS Elberon Ave.	1924	1957	Round Crack	Severe
"B"	St.	20" C.I.	111' WW Gulf Ave.	1913	1955	Joint	Severe
Bandini	St.	6" C.I.	30' SS Oliver St.	1919	1955	Rupture	Severe
Bandini	St.	6" C.I.	17' SS Oliver St.	1919	1955	Round Crack	Severe
Bandini	St.	6" C.I.	47' NN Oliver St.	1919	1955	Round Crack	Severe
Bluff	Pl.	4" C.I.	219' SS 36th St.	1932	1955	Round Crack	Severe
Crestwood	St.	6" C.I.	45' WW Cabrillo Ave.	1927	1955	Split	Severe
Frigate	Ave.	12" C.I.	Int. "E" St.	1924	1955	Joint	Moderate
Harbor Fwy.,							
W. Front	Rd.	6" C.I.	30' NS "E" St.	1955	1955	Joint	Moderate
Gaffey	St.	8" C.I.	20' NN 28th St.	1927	1955	Split	Severe
Gatun	St.	6" C.I.	200' EE Bandini St.	1926	1955	Joint	None
Henry Ford	Ave.	16" C.I.	273' NN Anchorage Rd.	1948	1955	Joint	Mild
Henry Ford	Ave.	16" C.I.	N/o Cerritos Channel	1948	1955	Joint	Mild
Island	Ave.	6" C.I.	42' SS "B" St.	1926	1955	Joint	None
Mauretania	St.	16" C.I.	15' EW Mahar Ave.	1955	1955	Joint	None
Mauretania	St.	16" C.I.	16' EW Mahar Ave.	1955	1955	Joint	None
Old Dock	St.	16" C.I.	5394' EE Mormon St. LB	1925	1955	Joint	None
Outer Harbor	Rd.	10" C.I.	200' SS 14th St.	1914	1955	Joint	Moderate
						Rupture and	
Pacific	Ave.	10" C.I.	70' SS 30th St.	1915	1955	Split	Severe
Carolina	Ave.	6" C.I.	56' NN 26th St.	1945	1953	Split	None
Outer Harbor	Rd.	10" C.I.	475' SS 14th St.	1938	1953	Rupture	Severe
"D"	St.	6" C.I.	65' EE Marine Ave.	1913	1956	Split and	Severe
						Rupture	None
Gatun	St.	6" C.I.	504' WW Gaffey St.	1942	1956	Joint	None
Henry Ford	Ave.	16" C.I.	328' NS Face of Draw Bridge	1948	1956	Joint	Mild
Hermosa	St.	8" C.I.	5' WE LaPaloma St.	1940	1956	Joint	Moderate
Cabrillo	Ave.	6" C.I.	73' NN 24th St.	1928	1956	Round Crack	None
Avalon	Bivd.	6" C.I.	115' NN "A" St.	1912	1956	Rupture	None
Avalon	Bivd.	20" C.I.	107' NN "C" St.	1912	1956	Round Crack	None
Cabrillo	Ave.	4" C.I.	352' SS 36th St.	1925	1956	Round Crack	Severe
Mauretania	St.	16" C.I.	13' EW Mahar (LN) Ave.	1955	1956	Joint	None
Pioneer	Ave.	6" C.I.	40' NN "I" St.	1928	1956	Round Crack	None
Crestwood	St.	6" C.I.	70' EE Meyler St.	1927	1957	Split-Rupture	Severe
Elberon	St.	6" C.I.	314' WW Gaffey Pl.	1926	1957	Round Crack-	
						Rupture	Severe
Gaffey	St.	6" C.I.	45' SS 22nd St.	1927	1957	Round Crack-	
						Rupture	Severe
Leland	St.	4" C.I.	133' SS Elberon Ave.	1924	1957	Round Crack	Severe
Signal	St.	10" C.I.	407' NN 22nd St.	1914	1957	Joint	Severe
Watson	Ave.	8" C.I.	94' SS Opp St.	1927	1957	Round Crack	None
Anaheim	St.	20" C.I.	552' WW "I" St.	1929	1957	Joint	None
Seaside	Ave.	6" C.I.	91' EE Mormon St.	1925	1957	Round Crack	None
Elberon	St.	4" C.I.	384' WW Leland St.	1929	1946	Round Crack	Severe
Alma	St.	6" C.I.	84' NN Hamilton Ave.	1924	1952	Round Crack	Severe
"E"	St.	6" C.I.	16' EE Figueroa St.	1939	1952	Rupture	Moderate
Paseo Del Mar		6" C.I.	75' WW Cabrillo Ave.	1928	1952	Rupture	Severe

Main	St.	Main Size	Location	Main Install.	Date of Fail.	Type of Break	Corrective Action
Paseo Del Mar	St.	6" C.I.	116' WW Parker St.	1928	1946	Split	Severe
Paseo Del Mar	6" C.I.	68' WW Parker St.	1925	1952	Severe		
Summerland	Ave.	6" C.I.	154' EE Bandini St.	1925	1952	Round Crack	Severe
Summerland	6" C.I.	55' EE Bandini St.	1925	1952	Severe		
Alameda	St.	6" C.I.	3' SN Young (LW) St.	1923	1946	Round Crack	Severe
Alameda	St.	6" C.I.	4' SS Young (LW) St.	1923	1946	Joint	None
"B"	St.	20" C.I.	10' EE Hawaiian Ave.	1913	1946	Joint	None
On Mole							
(Barraenda St.)							
Cabrillo	Ave.	4" C.I.	100' SN End of Mole	1936	1946	Joint	Slight
Alameda	St.	6" C.I.	1' SN 6th St.	1923	1946	Joint	Severe
On Mole		6" C.I.	31' WE Henry Ford Ave.	1923	1946	Joint	Moderate
Pioneer	St.	4" C.I.	110' SS Bass St.	1936	1946	Joint	Slight
Robidoux	St.	6" C.I.	12' SN Anaheim St.	1928	1946	Joint	None
Sanford	Ave.	4" C.I.	496' WW Goodrich Ave.	1923	1946	Joint	None
Sanford	6" C.I.	128' NN Anaheim Blvd.	1928	1946	Joint	Severe	
Wilm.-S.P.	Rd.	6" C.I.	150' NN Anaheim Blvd.	1928	1946	Joint	Severe
Wilm.-S.P.	Rd.	20" C.I.	2985' NN Battery St.	1913	1946	Joint	None
22nd	St.	20" C.I.	3245' NN Battery St.	1913	1946	Joint	None
Priv. R./W 2526'		12" C.I.	5' EW Signal St.	1942	1946	Joint	Severe
S/o Anaheim	St.	12" C.I.	16' EE Henry Ford Ave.	1924	1947	Joint	Moderate
28th	St.	6" C.I.	114' EE Cabrillo Ave.	1920	1947	Joint	None
28th	St.	6" C.I.	140' EE Cabrillo Ave.	1920	1947	Joint	None
Alma	St.	6" C.I.	62' SS Hamilton St.	1928	1947	Round Crack	Severe
Anaheim	St.	8" C.I.	75' WW Farragut Ave.	1928	1947	Joint	None
Anaheim	St.	8" C.I.	150' EE Sampson Ave.	1928	1947	Joint	None
S. End Barraenda							
I.A. Yacht Club							
Cabrillo	Ave.	4" C.I.	150' SS Mole	1936	1947	Joint	Mild
Wilm.-S.P.	Rd.	8" C.I.	18' NN 30th St.	No Rec.	1947	Joint	None
Pacific	Ave.	10' C.I.	366' NN Story Ave.	1917	1947	Joint	Moderate
		20' C.I.	17' SN 3rd St.	1914	1948	Joint	None
Anaheim	St.	6" C.I.	79' NN Pennington Ave.	1933	1948	Joint	None
Anaheim	St.	8" C.I.	358' WE end of Viaduct	1928	1948	Joint	None
Avalon	Blvd.	20" C.I.	63' WW Farragut Ave.	1913	1948	Joint	None
Gaffey	St.	20" C.I.	9' SS "F" St.	1913	1948	Joint	Slight
16th	St.	20" C.I.	158' NS Battery St.	1924	1948	Joint	Mild
Anaheim	St.	6" C.I.	74' EE Mesa St.	1913	1949	Joint	Severe
"B"	St.	8" C.I.	43' WW Farragut Ave.	1928	1949	Joint	None
Water	St.	20" C.I.	123' EE Wilmington Blvd.	1913	1949	Joint	None
Alameda	St.	10" C.I.	190' EE Fries St.	1936	1949	Joint	Severe
*Signal	St.	6" C.I.	3' SN Young St.	1923	1949	Joint	None
Wilm.-S.P.	Rd.	10" C.I.	2400' SS 22nd St.	1914	1949	Split or Rupture	Severe
Carolina	St.	20" C.I.	4007' SS Downing St.	1913	1949	Joint	None
Carolina	St.	6" C.I.	15' NN 26th St.	1945	1950	Split	Severe
Cabrillo	St.	6" C.I.	26' NN 26th St.	1945	1950	Split	Severe
Paseo Del Mar	St.	6" C.I.	79' NN 25th St.	1928	1951	Rupture	Severe
Alma	St.	6" C.I.	35' EE Parker St.	1928	1951	Split or Rupture	Severe
Mar Vista	Ave.	6" C.I.	135' NN 36th St.	1928	1950	Split or Rupture	Severe
Anaheim	St.	16" C.I.	15' NS Anaheim St.	1943	1950	Joint	None
Anaheim	St.	20" C.I.	160' WW "I" St.	1929	1950	Joint	None
Anaheim	St.	20" C.I.	573' WW "I" St.	1929	1950	Joint	None
Gaffey	St.	20" C.I.	28' SN Gatum St.	1924	1950	Joint	None

Main	St.	Main Size	Location	Main Install.	Date of Fail.	Type of Break	Corrosive Index
Wilm.-S.P.	Rd.	20" C.I.	2986' NN Battery St.	1913	1950	Joint	None
Wilmington	Blvd.	12" C.I.	31' SN Anaheim St.	1931	1950	Joint	Severe
Figueroa	St.	12" C.I.	10' NN "B" St.	1924	1950	Joint	Moderate
Figueroa	St.	12" C.I.	21' NN "B" St.	1924	1950	Joint	Moderate
			E/W Prop Fence Bet.				
Berth 195		8" C.I.	McCormick & Blinn Lbr.,	1924	1948	Joint	None
			305' NN U. S. Pier				
Henry Ford	Ave.	16" C.I.	1100' SS Anaheim St.	1925	1950	Joint	Moderate
Henry Ford	Ave.	16" C.I.	1136' SS Anaheim St.	1925	1950	Joint	Moderate
1st Harb. Dept.							
N/o Cerritos Ch.	Rd.	8" C.I.	100' WW Henry Ford Blvd.	1946	1947	Joint	Severe
Sanford	Ave.	6" C.I.	Bet. Anaheim & Opp St.	1928	1946	Joint	Severe
26th	St.	4" C.I.	12' EW Cabrillo Ave.	1924	1947	Broken by Pac.	
						Pipe Line Trench	
1st Harb. Dept.						Mach.	None
N/o Cerritos Ch.	Rd.	8" C.I.	WW Henry Ford Blvd.	1946	1947	Joint	Severe
Old Dock	St.	16" C.I.	2947' EE Mormon St.	1925	1947	Broken by	
						Clam Digger	Severe
Figueroa	St.	12" C.I.	16' NN "B" St. (LE)	1924	1949	Joint	Moderate
Gatun	St.	6" C.I.	W/o Gaffey St.	1926	1949	Joint	None
Henry Ford	Ave.	16" C.I.	1400' SS Anaheim St.	1925	1950	Joint	Severe
Pacific	Ave.	20" C.I.	29' NS Upland Ave.	1914	1947	Joint	Severe
28th	St.	6" C.I.	380' EE Alma St.	1928	1947	Joint	Severe
5th	St.	6" C.I.	500' W/o Gaffey St.	1937	1947	Corrosion	Severe

In the foregoing Schedule B, which duplicates some of the items listed in Schedule A above, we have designated the main, the street, the main size, the location on the street where the break occurred, the date of installation of the main by year, the date of failure of the main by year, the type of break, and the corrosive index of the soil in which the break occurred. Except for corrosivity, we have not designated the type of soil in which the main was installed, i.e., sand, clay, etc., for the reason that the Water and Power Department records are not complete on such items. No records whatever have been kept concerning the method of manufacture of the pipe, i.e., whether it was sand cast, molded, extruded, etc.

The Water System of the Department of Water and Power of the City of Los Angeles, as far as is known, has experienced only one break, at any time, on Pier 1, Los Angeles Harbor, where Berths 57, 58, 59 and 60 are all located. See item (Signal St. 2400' SS 22nd St.), line 18, page 17, which is starred in above schedule. This break was not due to corrosion.

Interrogatory No. XVI.

“(a). Does the City have any maps of the City of Los Angeles or any parts thereof indicating the corrosivity of soils with respect to the various areas in the City?

“(b). If the answer to (a) is ‘Yes,’ state in whose custody said maps or reports thereof are.

Attach copy of maps to answers to interrogatories.

“(c). Does the City have records of underground cast iron pipe failures which show size and class of pipe, location, dates of installation and of failure, type of soil and soil resistivity or corrosivity, or any of the above?”

“(d). If the answer to (c) is ‘Yes,’ state in whose custody said records are kept.”

Answer to Interrogatory No. XVI.

(a). Maps of the area within one mile of the pierhead [50] lines established by the Federal Government at Los Angeles Harbor, indicating the corrosivity of the soils in the area, are kept by the Water System of the Department of Water and Power.

(b). Such maps are in the custody of George W. Adrian, Engineering Department, Water Distribution, Department of Water and Power of the City of Los Angeles, 410 Ducommun Street, Los Angeles, California.

Copy of Map No. 24, distribution pipe system, showing soil corrosivity indexes and underground cast iron water pipe breaks due to corrosion within twenty years after installation, set forth in Schedule A in affiant's Answer to Interrogatory No. XIII (b), is attached hereto (original only).

(c). Yes, the City Water System of the Department of Water and Power has records of under-

ground cast iron pipe failures which show size and class of pipe, location, dates of installation and of failure, and corrosivity index.

(d). Such records are kept in the custody of George W. Adrian.

Interrogatory No. XVII.

“(a). State whether or not the City has in its employ engineers who are experts with respect to corrosion of piping.

“(b). If the City has such experts in its employ, state whether or not their services were used in any way in determining the reasonable life of the piping in question.”

Answer to Interrogatory No. XVII.

(a). The Water System, Department of Water and Power, has in its employ a corrosion engineer, Robert R. Ashline, whose duties are limited to Water and Power Department matters only.

(b). The services of a corrosion engineer were not used in determining the reasonable life of the pipe in question, for the reason that said pipe was installed by the Harbor Department and not by the Department of Water and Power, approximately during the [51] year 1914, at a time when such studies and services were not carried on in the field of underground water pipe installation generally. The Department of Water and Power did not have a corrosion engineer in its employ in 1914, or for

many years thereafter, and did not at any time make any studies to determine the reasonable life of the pipe in question, laid underground at Berth 59 at or about the year 1914.

/s/ ROBERT R. ASHLINE.

Subscribed and sworn to before me this 25th day of June, 1957.

[Seal] /s/ JOHN J. DEVINE,
Notary Public in and for the County of Los Angeles,
State of California.

My Commission expires July 10, 1960.

Respectfully submitted,

ROGER ARNEBERGH,
City Attorney,

ARTHUR W. NORDSTROM,
Assistant,

C. N. PERKINS,
Deputy,

By /s/ C. N. PERKINS,
Attorneys for Defendant
City of Los Angeles.

TRIPPET, YOAKUM,
STEARNS & BALLANTYNE,

By /s/ F. B. YOAKUM, JR.,
Of Counsel for Defendant
City of Los Angeles.

[Endorsed]: Filed July 15, 1957. [52]

[Title of District Court and Cause.]

SECOND AMENDED COMPLAINT

(For Damages)

Plaintiff Grace & Co. (Pacific Coast), a corporation, complains of defendants above named, and for cause of action alleges:

I.

Plaintiff Grace & Co. (Pacific Coast), is a corporation, organized under the laws of the State of West Virginia, and duly qualified to do business in the State of California. Defendant, The City of Los Angeles (hereinafter referred to as Defendant City) is a municipal corporation, existing under the laws of the State of California. Defendant, Outer Harbor Dock and Wharf Co. (hereinafter referred to as Defendant Outer Harbor) is a corporation, duly organized under the laws of the State of California. Defendants [54] Does 1 through 21 are individuals and/or corporations, citizens of or residents of California, whose true names are unknown to plaintiff, and who are therefore sued by said fictitious names, who participated in and are jointly liable with the defendants herein by reason of the evidence hereinafter alleged.

II.

Jurisdiction herein exists under Section 1332 of the United States Code by virtue of the fact that this is an action between citizens of different States

of the United States, involving in excess of \$3,000.00.

III.

That defendant City at all times mentioned herein owned and exclusively maintained a certain steel and concrete shed at Berth 59, Pier 1, Los Angeles Harbor in that portion of Los Angeles County known as San Pedro (hereinafter referred to as the said shed). Defendant City, together with defendant Outer Harbor at all times mentioned herein operated the said shed, for hire, for the receipt of merchandise in transit from various portions of the United States and of the world to various other portions of the United States and the world. Said shed now is and at all times mentioned herein was used to store goods brought to Los Angeles by ship while awaiting delivery of the same to the owners thereof.

IV.

Plaintiff is informed and believes and upon such information and belief alleges that defendant City possessed, controlled and operated said shed as the operator of a marine terminal in the following respects and in other and further respects not presently known to plaintiff:

Defendant City,

(a) had the power to and made all rules and regulations concerning the control, management and use of said shed;

(b) supervises the operation of the facilities [55] and properties at said shed through its

chief wharfinger and through other wharfingers assigned to said shed and various other employees some of whom are designated as auditors, plumbers, maintenance men and roving patrolmen;

(c) controls, supervises and accomplishes at its own cost and expense all maintenance and repairs at said shed;

(d) fixes the rates of dockage, wharfage, rents and other charges in connection with the use of said shed and assessed and collected such charges from all types of shippers and receivers who used said shed to store their goods and merchandise;

(e) from time to time accepts goods from virtually all types of shippers and receivers for storage in said shed and charges for said storage at established rates;

(f) has the power to and collects demurrage on all cargo that has been in said shed over a stated period of time;

(g) has the power to impress a lien on cargo that has been in said shed over a stated period of time to secure the collection of its fees and to subject the owner, shipper, consignee or carrier of such goods to personal liability for such fees;

(h) grants revocable non-exclusive licenses to private businesses to operate at the said shed and charges said licensees for dockage, wharfage and storage at said shed. In granting said licenses said defendant City reserves to itself the right to use

such space in said shed as at the time is not in use by said licensees and the obligation to at all times at its own expense keep and maintain said shed in a good and safe condition.

V.

As an integral part of said shed and the marine terminal facility operated therein as aforesaid, defendant City at all times herein mentioned exclusively owned, operated and maintained an eight-inch cast iron water pipe installed beneath said shed. Said eight-inch cast iron water pipe was installed by defendant City about the year 1914 at or about the time when the said shed was [56] constructed by said defendant City as a part of a water pipeline for supplying said shed with water.

VI.

Defendant Outer Harbor acting under a revocable, non-exclusive license granted by defendant City was at all times herein mentioned carrying on the business of and acting as terminal operators and contracting stevedores at said shed in common and jointly with the terminal operator business conducted therein by defendant City as hereinabove alleged.

VII.

Plaintiff Grace & Co. (Pacific Coast) was at all times hereinafter mentioned the owner of approximately 1,960 bags of coffee, the product of various South and Central American Countries, which said

coffee was at all times hereinafter alleged resting in said shed having been a short time prior thereto discharged by various vessels and was then and there awaiting delivery to plaintiff. Said bags of coffee were placed in said shed at the joint and in common invitation of defendant Outer Harbor and defendant City and for the benefit of both said defendants, pecuniarily and otherwise.

VIII.

Defendant City in its capacity as (a) owner of said shed and said eight-inch cast iron water pipe, (b) landlord in possession of said shed and said eight-inch cast iron water pipe and (c) as a marine terminal operator jointly and in common with defendant Outer Harbor, owed a duty to plaintiff to provide a safe shed for the interim storage of plaintiff's goods and to maintain said shed and said eight-inch cast iron water pipe in a safe and sound condition so as to prevent plaintiff's goods in said shed from becoming lost or damaged by the entry of water into said shed.

IX.

Defendant Outer Harbor as a terminal operator and [57] contracting stevedore at said shed jointly and in common with defendant City, owed a duty to plaintiff to provide a safe shed for the interim storage of plaintiff's goods and to maintain said shed and said eight-inch cast iron water pipe in a safe and sound condition so as to prevent plaintiff's goods in said shed from becoming lost or damaged by the entry of water into said shed.

X.

Defendant City and defendant Outer Harbor carelessly and negligently omitted and failed to provide a safe shed for the interim storage of plaintiff's goods in that:

(a) The floor of the said shed provided and used for such purpose by said defendants was of concrete which was poured on top of and which was dependent for support on a dirt fill which was over said eight-inch cast iron water pipe;

(b) Defendant City adopted and at all times herein mentioned pursued a policy with respect to the maintenance of said eight-inch cast iron water pipe of not inspecting said pipe or replacing the same until a break occurred and water had escaped and saturated the surrounding ground to the extent that it was detectable from the surface; and

(c) Said shed did not have adequate watchmen or other available detection devices to detect leakage from said eight-inch cast iron water pipe and/or adequate watchmen or other available device at said shed to discover the entry or presence of water in said shed.

XI.

Defendant City and defendant Outer Harbor carelessly and negligently omitted and failed to maintain said shed and said eight-inch cast iron water pipe in a safe and sound condition, but to the contrary said defendants negligently and carelessly allowed said eight-inch cast iron water pipe to be

come ancient and in a weak, corroded and decayed condition so that said pipe could not contain [58] the water under the pressure placed therein by said defendant City.

XII.

That by reason of the negligence of the defendant City and defendant Outer Harbor as aforesaid and as set forth hereinafter, beginning on a date that is unknown to plaintiff and continuing to on or about March 12, 1956, a large quantity of water escaped from said eight-inch cast iron water pipe under high pressure and on or about the 12th day of March, 1956, said large quantity of water entered said shed and wet the plaintiff's coffee to the damage of said coffee in the sum of \$30,000.00 as nearly as the same can be ascertained.

XIII.

That said damage to plaintiff's coffee was caused by the negligence of defendant City and defendant Outer Harbor as aforesaid and in the following respects:

(a) In that the defendants maintained high water pressure in said pipe without ascertaining whether said pipe was of sufficient strength at said time to withstand said pressure.

(b) In that said pipe was of such an age as, under existing conditions, to render it unsafe for the purpose intended.

(c) In that defendants failed to keep an adequate watch at said shed and to discover said leak-

age with reasonable speed, so as to move said coffee from said water as soon as possible.

(d) In other further respects which are not presently known to plaintiff.

XIV.

That on the 25th day of April, 1956, plaintiff Grace & Co. (Pacific Coast) duly and regularly filed its verified claim covering the above-mentioned damages with Walter C. Peters, the City Clerk of the City of Los Angeles. That said verified claim specified the name and address of claimant, the date and place of the action of which complaint is made, and the extent of the damage received. [59]

That the said claim has been rejected by defendant City. That nothing has been paid on account of the said claim or any part thereof.

XV.

That all and singular the premises are true and are within the jurisdiction of this Honorable Court.

Second Cause of Action

I.

Plaintiff refers to Paragraphs I, II, XIV and XV of its First Cause of Action and by reference incorporates the same herein as though set forth in full.

II.

That defendant City at all times herein mentioned exclusively owned, operated and maintained

a certain eight-inch cast iron water pipe installed beneath a certain steel and concrete shed (hereinafter referred to as said shed), situate at Berth 59, Pier 1, Los Angeles Harbor in that portion of Los Angeles County known as San Pedro.

III.

That said eight-inch cast iron water pipe was installed about the year 1914 by defendant City as a part of a water pipeline system which now is and at all times herein mentioned was owned and operated by defendant City in its proprietary capacity for supplying water to various consumers, for which purpose said defendant City maintained water meters and charged consumers at established rates for the use of said water.

IV.

Plaintiff, Grace & Co. (Pacific Coast) was at all times hereinafter mentioned the owner of approximately 1,960 bags of coffee the product of various South and Central American Countries which said coffee was at all times hereinafter alleged in the said shed having been a short time prior thereto discharged by various [60] vessels and was then and there awaiting delivery to plaintiff.

V.

That defendant City as the owner and operator of said eight-inch cast iron water pipe as aforesaid, owed a duty to plaintiff to maintain said water pipe in a reasonably safe and sound condition so as to

prevent loss or damage to plaintiff's goods stored in said shed as aforesaid by the escape of water from the said pipe, but to the contrary and with disregard for the safety of goods and merchandise in said shed, defendant City adopted and at all times herein mentioned pursued a policy with respect to the maintenance of said eight-inch cast iron water pipe of not inspecting said pipe or replacing the same until a break occurred and water had escaped and saturated the surrounding ground to the extent that it was detectable from the surface.

VI.

That defendant City negligently and carelessly omitted and failed to maintain said eight-inch cast iron water pipe in a safe and sound condition or at all and negligently and carelessly allowed said pipe to become ancient and in a weak, corroded and decayed condition so that said pipe could not contain water under the pressure placed therein by said defendant City.

VII.

That by reason of the negligence of the defendant City as aforesaid and as set forth hereinafter, beginning on a date that is unknown to plaintiff and continuing to on or about March 12, 1956, a large quantity of water escaped from said eight-inch cast iron water pipe under high pressure and on or about the 12th day of March, 1956, said large quantity of water entered said shed and wet the plaintiff's coffee to the damage of said coffee in the sum

of \$30,000.00 as nearly as the same can be ascertained.

VIII.

That said damage to plaintiff's coffee was caused by the [61] negligence of defendant City as aforesaid and in the following respects:

(a) In that defendant City maintained high water pressure in said pipe without ascertaining whether said pipe was of sufficient strength at said time to withstand said pressure.

(b) In that defendant City omitted to maintain said pipe with the result that said pipe was in such condition that it could not maintain the water pressure placed therein by defendant City.

(c) In that said pipe was of such an age as, under existing conditions, to render it unsafe for the purpose intended.

(d) In that defendants failed to keep an adequate watch or maintain available detection devices to discover said leakage from said pipe with reasonable speed.

(e) In other further respects which are not presently known to plaintiff.

Third Cause of Action

I.

Plaintiff refers to Paragraphs I, II, III, V, VII, XIV and XV of its First Cause of Action and by reference incorporates the same herein as though set forth in full.

II.

Said defendant City is a local agency under the definition of and within the meaning of Sections 53050 and 53051 of the Government Code of California. The said shed at Berth 59, Pier 1, Los Angeles Harbor in that portion of Los Angeles County known as San Pedro, owned as hereinabove alleged by defendant City and the said eight-inch cast iron water pipe installed beneath said shed and owned as hereinabove alleged by the said defendant City is public property under the definition of and within the meaning of Sections 53050 and 53051 of the Government Code of California.

III.

On or about March 12, 1956, said public property was, and [62] for many years prior to said date, the exact time being unknown by plaintiff, had been in a dangerous and defective condition, in that:

(a) Defendant City at all times herein mentioned planned, constructed, installed and maintained said public property in a manner and according to a design inherently dangerous and defective for the intended use and the use made of said public property. Plaintiff is informed and believes and upon such information and belief alleges that defendant City about the year 1914 constructed said public property according to the following plan and in the following manner: Said eight-inch cast iron water pipe was installed and buried in approxi-

mately three to four feet of earth near the water beneath what is now the said shed at Berth 59, Pier 1, Los Angeles Harbor in that portion of Los Angeles County known as San Pedro. A compacted dirt fill was placed over the top of said eight-inch cast iron water pipe. The floor of the said shed was constructed by laying a wire mesh over the top of said compacted dirt fill and pouring concrete of a depth of approximately six inches on top of said wire mesh without the use of reinforcing steel. Said floor was dependent for support on the said dirt fill and could not withstand the weight of the cargo intended to be placed thereon and which was regularly and usually placed thereon in the absence of the support of said dirt fill. With respect to the maintenance of said eight-inch cast iron water pipe, defendant City adopted and at all times herein mentioned pursued a policy of not inspecting said pipe or replacing the same until a break occurred and water had escaped and saturated the surrounding ground to the extent that it was detectable from the surface.

(b) Said shed did not have adequate watchmen or other available detection devices to detect leakage from said eight-inch cast iron water pipe and/or adequate watchmen or other available devices at said shed to discover the entry or presence of water in said shed. [63]

(c) Said eight inch cast iron water pipe was ancient and in a weak, corroded and decayed con-

dition so that said pipe could not contain water and rendered it unsafe for the purpose intended.

(d) Said eight inch cast iron water pipe was of such an age and under existing soil conditions said pipe could not reasonably have been expected to contain water under pressure therein.

(e) In other and further respects which are not presently known to plaintiff.

By reason of these premises plaintiff's goods situate in said shed were subjected to great and unreasonable risk of loss or damage from the dangerous and defective condition of said public property.

IV.

Defendant City knew and had notice or in the exercise of reasonable care in the ordinary course of the business and governmental activities it conducted should have known and had notice of the defective and dangerous condition of said public property as hereinabove alleged in Paragraph III.

V.

Plaintiff is informed and believes and on such information and belief alleges that defendant city had knowledge or notice or should have had knowledge and notice as hereinabove alleged of the following matters and conditions and others not presently known to plaintiff:

(a) That underground cast iron pipe, such as the said eight inch cast iron water pipe installed, owned

and maintained by defendant City beneath said shed as hereinabove alleged is subject to deterioration and failure from graphitic corrosion and that when such pipe is exposed to soils near the sea the rate of deterioration and failure from graphitic corrosion is greatly increased.

(b) That the danger of failure of underground cast iron pipe from graphitic corrosion in the Harbor District in that portion [64] of Los Angeles County known as San Pedro is particularly great.

(c) That the said eight inch cast iron water pipe installed, owned and maintained by defendant city beneath said shed as hereinabove alleged was of such an age, as under existing conditions, to render it unsafe and make it unreasonable to expect said pipe to contain water under pressure therein.

(d) That by failing and omitting to install and make use of available detection devices to discover leakage from said eight inch cast iron water pipe and by not inspecting said pipe or replacing the same until a failure occurred and was detected from the surface, that the goods and merchandise in said shed would be subject to great risk of loss or damage by the flooding of said shed with water.

(e) That when said eight inch cast iron water pipe failed and was unable to contain water under the pressure therein that the fill supporting the floor of said shed would be saturated with water and would subside and that the goods and merchandise in said shed would be subject to great risk of loss or

damage by the collapse of said floor and/or the flooding of said shed with water.

VI

Defendant City for a reasonable time after it knew and had notice of the dangerous and defective condition of said public property as aforesaid had ample opportunity to take action necessary to protect the public including the plaintiff herein against said condition, but negligently and carelessly failed and omitted to correct the dangerous and defective condition of said public property or to protect the public including plaintiff against the said condition or at all.

VII

That by reason of the dangerous and defective condition of said public property as hereinabove alleged and the negligence and [65] carelessness of the defendant City in failing and omitting to remedy said condition or to take action to protect the public including the plaintiff against said condition after said defendant City had knowledge and notice as aforesaid of the dangerous and defective condition and beginning on a date that is unknown to plaintiff and continuing to on or about March 12, 1956, a large quantity of water escaped from said eight inch cast iron water pipe under high pressure and on or about the 12th day of March, 1956, said large quantity of water entered said shed and wet the plaintiff's coffee to the damage of said coffee in the sum of \$30,000 as nearly as the same can be ascertained.

Wherefore, plaintiff prays judgment against defendants as follows:

1. That plaintiff have and recover from defendants the sum of \$30,000.00
2. That plaintiff have and recover interest and costs herein with such other and further relief as the Court may deem just and proper in the premises.

McCUTCHEN, BLACK,
HARNAGEL & SHEA,

By /s/ PHILIP K. VERLEGER,
Attorneys for Plaintiff,
Grace & Co. (Pacific Coast).

Duly verified.

[Endorsed]: Filed August 12, 1958.

[Title of District Court and Cause.]

ANSWER OF CITY OF LOS ANGELES TO
PLAINTIFF'S SUPPLEMENTAL INTER-
ROGATORIES

State of California,
County of Los Angeles—ss.

A. R. Martin, being duly sworn, deposes and says:

I am Assistant Harbor Engineer of the Harbor Department of the City of Los Angeles; from information obtained from personal knowledge,

investigation, reports of subordinate employees acting under my supervision, and records and files of the Harbor Department, I make the following answers to plaintiff's Supplemental Interrogatories:

Interrogatory No. 1

State whether or not there was any water meter or water meters connected to the water line or to the main supplying said water line, from which the water escaped in the present case, [68] particularly including any detector meters, on the line or lines connecting the Water Department main in Signal Street with the Harbor Department sprinkler main in Signal Street.

Answer to Interrogatory No. 1

Yes.

Interrogatory No. 2

State whether or not any person read said meters, or any of them, at any time.

Answer to Interrogatory No. 2

On information and belief I am informed that By-Pass Meters (sometimes called detector meters) were read by an employee of the Department of Water & Power.

Interrogatory No. 3

Were any of said water meters read within the three months next preceding March 12, 1956?

Answer to Interrogatory No. 3

Yes.

Interrogatory No. 4

If the answer to Interrogatory No. 3 is "yes," state:

(a) The name, description and location of each said meter;

(b) The date on which each said meter was read;

(c) The manner in which the reading was recorded, if it was so recorded;

(d) The person to whom the meter readings were given and the use made of them, if any. [69]

(e) The name and address of each person reading said meter.

Answer to Interrogatory No. 4

(a) Service No. 2690—a 1-inch Hersey By-Pass Meter, No. 1350948, located near Berth 60 and about 5 feet east of the west line of Signal Street.

Service No. 2692— a 1-inch Hersey By-Pass Meter, No. 1350944, located near Berth 58 and about 4 feet east of the west line of Signal Street.

Service No. 8849—a 1-inch Hersey By-Pass Meter, No. 1350937, located near Berth 57 and about 4 feet east of the west line of Signal Street.

(b) On information and belief I am informed each of these three meters was read by an employee

of the Department of Water & Power on January 7, 1956, two of them were read on February 4, 1956, and the third (Service No. 8849) was read on February 9, 1956, and all three of them were read March 1, 1956.

(c) On information and belief I am informed that the readings were recorded on the Automatic Sprinkler Service Records of the Department of Water & Power.

(d) On information and belief I am informed the meter readings were given to someone in the billing department of the Department of Water & Power and thereafter bills were submitted to the accounting department of the Harbor Department.

(e) On information and belief I am informed the name and address of the employee of the Department of Water & [70] Power who read the three meters on the dates in question is Charles C. Connor, 127 West 87th Street, Los Angeles.

Interrogatory No. 5

State whether any records exist of the reading of said meters during any of the said period.

Answer to Interrogatory No. 5

Yes.

Interrogatory No. 6

State whether, upon the reading of said meters, any flow of water was indicated.

Answer to Interrogatory No. 6

On information and belief I am informed that on some of the occasions in question a flow of water was indicated.

Interrogatory No. 7

If the answer to Interrogatory No. 6 is "Yes," state:

- (a) The date when said flow was indicated;
- (b) The rate and amount of said flow;
- (c) The cause of said flow, if it was established;
- (d) What, if anything, was done to stop said flow;
- (e) Whether such measure was successful in stopping said flow.

Answer to Interrogatory No. 7

(a) On information and belief I am informed that the flow was indicated during the period or a portion of the period approximately 30 days [71] preceding the reading of the meters.

(b) The amount of the flow was as follows (measured in 100 cu. ft.):

Date of Reading	Service No. 2690	Service No. 2692	Service No. 8849
1/7/56	25	8	1
2/4/56	38	6	
2/9/56			1
3/1/56	29	5	None

(c) There are various causes for the flow. There was about 6000 feet of underground pipe on this one fire prevention system and in said pipe there were about 600 leaded joints or about 10 leaded joints per 100 feet. Some of the causes, but not necessarily all, are as follows:

1. Minor leaks in the joints.
2. There were 36 2-inch drain valves which sometimes leak and are sometimes turned on when working on the system.
3. There were 36 $\frac{3}{4}$ -inch inspector's test valves which are used for testing whether the fire system is working and whenever these test valves are turned on a flow may be registered through the By-Pass Meters.
4. Improper seating of the alarm valves.
5. If there is a surge in the pressure the alarm valves will open and the water will go into a closed drain. The water mentioned in explanations 2 and 3 also goes into the same closed drain and is not apparent.
6. Longshoremen or other persons will sometimes "skylark" by turning on the fire hoses that are [72] present in the transit sheds merely for the fun or thrill of seeing water under pressure. There were 36 fire hose valves in the system on March 12, 1956.

(d) As leaks became known they would be repaired, and when valves were found turned on they

would be turned off, or if observed leaking they would be repaired.

(e) Stopping the flow was successful when a leak was discovered and repaired or a turned-on faucet was found and closed.

Interrogatory No. 8

State the name and address of the person or persons having custody of the records referred to above, and the place where said records are kept.

Answer to Interrogatory No. 8

The monthly bills which the Department of Water & Power submitted to the Harbor Department are kept in the accounting division of the Harbor Department at the City Hall in San Pedro in the office of W. J. Bullock.

On information and belief the meter readings made by the Department of Water & Power are kept by the Department of Water & Power in San Pedro.

Interrogatory No. 9

If the answer to Interrogatory No. 1 is "Yes," state the name, description and location of each said meter.

Answer to Interrogatory No. 9

Interrogatory No. 9 has already been answered in the [73] answer to Interrogatory No. 4(a).

/s/ A. R. MARTIN.

Subscribed and sworn to before me this 24th day of September, 1958.

[Seal] /s/ LILLIAN B. KINZY,
Notary Public, in and for Said
County and State.

[Endorsed]: Filed September 26, 1958. [74]

[Title of District Court and Cause.]

STIPULATION AND ORDER

It is hereby stipulated by and between counsel for plaintiff Grace & Co. (Pacific Coast), a corporation, and the defendants, The City of Los Angeles, a municipal corporation, Outer Harbor Dock and Wharf Company, a California corporation, and Third-Party Defendant Grace Line, Inc., that plaintiff Grace & Co. (Pacific Coast) may file its Second Amended Complaint herein and that any new matter therein alleged except as admitted or affirmatively alleged by way of answer to the First Amended [76] Complaint shall be deemed denied without further answer by the named defendants herein.

Dated: August 11, 1958.

McCUTCHEN, BLACK,
HARNAGEL, & SHEA,

By /s/ HOWARD J. PRIVETT,
Attorneys for Plaintiff,
Grace & Co. (Pacific Coast).

ROGER ARNEBERGH,
City Attorney,
ARTHUR W. NORDSTROM,
Assistant,
C. N. PERKINS,
Deputy,

8/11/58.

By /s/ F. B. YOAKUM JR.,
Attorneys for Defendant,
The City of Los Angeles.

TRIPPETT, YOAKUM,
STEARNS & BALLANTYNE,

By /s/ F. B. YOAKUM, JR.,
Of Counsel for Defendant,
The City of Los Angeles.

8/12/58

OVERTON, LYMAN
AND PRINCE,

By /s/ AUGUST FELANDO,
Attorneys for Defendant, Outer Harbor Dock and
Wharf Co.

LILLICK, GEARY, McHOSE, ROETHKE &
MYERS,

By /s/ DAVID L. HAYUTUI,
Attorneys for Third-Party
Defendant, Grace Line, Inc.

It is so ordered: August 12, 1958.

/s/ BEN HARRISON.

[Endorsed]: Filed August 12, 1958. [77]

[Title of District Court and Cause.]

STIPULATION AND ORDER

It is hereby stipulated by and between the parties hereto that the trial on October 6, 1958, in the above-entitled action shall be on the issue of liability only and that if an interlocutory judgment is made determining liability to be upon defendants, a subsequent date shall be set thereafter for a trial on the issue of damages. [78]

Dated: September 23, 1958.

McCUTCHEN, BLACK,
HARNAGEL & SHEA,

By /s/ ANN E. STODDER,
Attorneys for Plaintiff,
Grace & Co. (Pacific Coast).

ROGER ARNEBERGH,
City Attorney,
ARTHUR W. NORDSTROM,
Assistant,
C. N. PERKINS,
Deputy,

By /s/ F. B. YOAKUM JR.,
Attorneys for Defendant,
The City of Los Angeles.

TRIPPETT, YOAKUM,
STEARNS & BALLANTYNE,

By /s/ F. B. YOAKUM JR.,
Of Counsel for Defendant,
The City of Los Angeles.

OVERTON, LYMAN AND
PRINCE,

By /s/ DAN BRENNAR,

Attorneys for Defendant, Outer Harbor Dock and
Wharf Co.

LILLICK, GEARY, McHOSE, ROETHKE &
MYERS,

By /s/ J. ROBERT ROETHKE,

Attorneys for Third-Party
Defendant, Grace Line, Inc.

It is so ordered: September 26, 1958.

/s/ HARRY C. WESTOVER,

United States District Judge.

[Endorsed]: Filed September 26, 1958.

[Title of District Court and Cause.]

MEMORANDUM OF OPINION

Defendant, City of Los Angeles, was and now is the owner of Berth 59, Los Angeles Harbor, and together with defendant, Outer Harbor Dock and Wharf Co., operated a certain steel and concrete shed at Berth 59 in that portion of Los Angeles County known as San Pedro.

Plaintiff was the owner of approximately 1,960 bags of coffee, which had been stored in the shed at

Berth 59 after having been discharged by various vessels and was awaiting delivery to plaintiff. [80]

Defendants maintained in the public street adjacent to the shed at Berth 59 a certain 8-inch cast-iron water pipe-line. A lateral line leading into the shed from the 8-inch pipe burst, allowing a great quantity of water to escape from the pipe-line under high pressure, which water flooded the floor of the shed at Berth 59 and damaged plaintiff's coffee.

Plaintiff alleges the defendants permitted the pipe to remain beneath the shed, although defendants knew or in the exercise of due care should have known that the pipe was in an ancient, weak, corroded and decaying condition, so that the pipe could not have reasonably been expected to contain water under high pressure.

At the time the pipe was installed, it was the best pipe available. Plaintiff makes no contention that the pipe-line or the lateral where the break occurred was negligently installed. At the time of installation defendants did not know of the corrosive nature of the soil, but subsequent to the installation the City, or some of its departments, became cognizant that the soil in the harbor area was highly corrosive. Based upon economic consideration, defendants established a policy of doing nothing about maintaining, repairing or replacing such water pipe-lines until a leak occurred and water was discovered on the surface of the ground.

Plaintiff contends defendants knew or should have

known that the pipe was located in highly corrosive soil and, over the period of years involved, defendants should have conducted some sort of inspection to ascertain if the pipe had corroded in order to determine whether there was likelihood of the pipe bursting. Plaintiffs contend that failure to make an inspection for forty years was negligence. [81]

At the trial experts testified the pipe in question failed because of graphitic corrosion. Graphitic corrosion occurs when iron in pipe is leached out and replaced by graphite. The leaching of the iron from the pipe and the replacement thereof by graphite occurs over a long period of time and does not change the pipe shape or contour. The only effect upon the pipe is that it loses strength so that under pressure the pipe in those particular spots where graphitic corrosion occurs gives way.

Plaintiffs contend defendants had knowledge that a break was imminent, for some months prior thereto there appeared to be a leakage in the system of more than one hundred thirty (130.00) cubic feet of water per day. However, experts testified at the trial that in a graphitic corrosion break there is no gradual leakage, but that the surface of the pipe gives way all at once and thus allows water to spurt from the pipe.

After defendants received notice of the break in the pipe, the line was repaired by cutting out an eight- or ten-foot length of pipe and inserting herein a new piece of cast-iron pipe. Defendants'

employees found in the pipe removed an opening caused by graphitic corrosion, approximately the size of a human hand. They also discovered that within a short distance on either side of the opening the pipe was in sound condition, so that it could be continued in use.

Plaintiff contends defendants are liable under two theories, the first being under the doctrine of *Rylands vs. Fletcher* (1860) L.R. 3, H.L. 330—(liability without fault or absolute liability)—and, second negligence. [82]

Absolute Liability

Judge Yankwich of this court discusses *Rylands vs. Fletcher* in *Gainey vs. Folkman*, 114 F. Supp. 231, saying at page 233:

“This case [*Rylands vs. Fletcher*] was the starting point of a theory of liability which sought to depart from the old rule which postulated liability only upon the existence of fault or negligence. It envisaged situations where, despite the absence of fault or negligence, the use of one’s property might be detrimental to others. Today the trend is to fasten liability if the result of the use constitutes a nuisance as to the adjoining owner.”

The plaintiff in the above case contended that dusting of agricultural crops by the defendant had caused damage to alfalfa which was growing on plaintiff’s land. Judge Yankwich stated:

“* * * Even the most extreme application of the doctrine of *Rylands vs. Fletcher* would not warrant interference with a legitimate process, the dusting of plants of one's own property to control insect infestation * * *”

The rule in California is stated by the California Supreme Court in *Green vs. General Petroleum Corp.*, 205 Cal. 328. At page 332 the Court said:

“* * * The rule is laid down in the decisions that a defendant is not liable unless he has been guilty of negligence. It has many variations. For instance, there is [83] found in our reports the declaration that when a person engaged in a lawful business exercises due care, the law does not make him an insurer of others against those consequences of his acts which reasonable care and foresight could not have prevented * * *”

“* * * It ought to be, and we are of the view that it is the rule that, where an injury arises out of, or is caused directly and proximately by the contemplated act or thing in question, without the interposition of any external or independent agency which was not or could not be foreseen, there is an absolute liability for the consequential damage, regardless of any element of negligence either in the doing of the act or in the construction, use or maintenance of the object or instrumentality that may have caused the injury.

“* * * [We are led] to the conclusion that the rule that injury may exist without liability is, as

has been so well stated by another court, 'contrary to the general rule of liability where injury is caused; and since, in a sense, it is a preference of the rights of one property owner or user over that of another; and since the law is a jealous guardian of the right to lawfully use property without interference or diminution; and since the rule of "sic utere tuo ut alienum non laedas" is of broad and fundamental importance — the rule which allows such injury without liability therefore is an exception which is and should be narrowly limited [84] and carefully confined.' (Sussex Land etc. Co. vs. Midwest Refining Co., 294 Fed. 597, 607.) * * *

In the case at bar, there was the interposition of an external, independent agency which could not have been and was not foreseen by the defendants at the time the pipe was installed. The evidence indicates the defendants did not know the pipe was laid in corrosive soil and did not obtain such information until many years after its installation.

The United States Court of Appeals for the Tenth Circuit, in *Anderson-Prichard Oil Corporation vs. Parker*, 245 F.2d 831, sustained a jury instruction given by the lower court to the effect that under the facts as presented to the jury there was no liability without fault.

Former District Judge Hamlin of the Northern District of California (now a member of the United States Court of Appeals for the Ninth Circuit) in *Atkinson Co. vs. Merrit, Chapman & Scott Corp*

123 F.Supp. 720 (1954), discussed the problem of liability without fault in California. Prior to Judge Hamlin's decision, Judge James H. Oakley, sitting in the Superior Court of the State of California, in and for the County of Sacramento, wrote a memorandum of opinion dealing with the question of liability without fault. In his opinion Judge Hamlin points out that aside from the opinion of Judge Oakley there are three cases in California that indicate the Rylands vs. Fletcher doctrine does not apply in California—Sutliff vs. Sweetwater Water Company (1920), 182 Cal. 34; Smith vs. East Bay Municipal Utility Dist., 1954) 122 Cal. App. 2d 613, and Curci vs. Palos Verde Irrigation District (1945), 69 Cal. App. 2d 583. [85]

Judge Hamlin also states that plaintiff relied upon three principal cases—Kall vs. Carruthers (1922), 59 Cal. App. 555, Parker vs. Larsen (1890), 86 Cal. 236, and Nola vs. Orlando (1932), 119 Cal. App. 518. He points out that these three cases all involve seepage of water, impounded by the defendants, onto land of plaintiffs. In all three cases recovery of damages and injunctions were permitted without proof of negligence. Judge Hamlin concludes:

“The court is of the opinion that the law of California is as stated by Judge Oakley and that this case is more clearly analogous to the Sutliff case, and that liability without fault under the Fletcher doctrine will not lie.”

In Schindler vs. Standard Oil Company of Indiana, 232 S.W. 735, the Court held there could be no

recovery for damage caused by a leak in a water pipe on adjoining premises in the absence of negligence on the part of the adjoining land owner in the original construction of the pipe or in discovering or repairing known defects.

Judge Peirson M. Hall of this court, while a judge of the Superior Court of the State of California, in and for the County of Los Angeles, in Case No. 45697, Hubert F. Laugharn, etc. vs. Bolsa Chica Oil Corporation (July, 1941), wrote an excellent opinion in which he discussed the law relative to liability in the absence of negligence. In that case, the driller of an oil well forced drilling mud into a well under hydrostatic pressure which mud, according to the plaintiff, traveled through the underground structure from defendant's well into plaintiff's well, thereby causing damage to plaintiff's well. [86]

Plaintiff filed a complaint in two counts, the first count being based upon the theory of absolute liability for injury done to plaintiff. In the second count, the acts of defendant in drilling its well were alleged to have been negligently performed. Upon demurrer to the first cause of action the Court, after exhaustive review of the authorities in California and elsewhere, held the doctrine of Rylands vs. Fletcher did not apply and that although plaintiff suffered damage he could not recover unless he could show the damage was caused by negligence on the part of defendant.

In the case at bar we are inclined to follow the rule as set forth in *Green vs. General Petroleum*

Corp., *supra*. The Court is of the opinion Judge Hamlin has set forth the proper rule to be applied in California and that the Fletcher vs. Rylands doctrine does not apply in the case at bar.

Negligence

If, in the case at bar, the Court is to find for plaintiff, it will be necessary to find defendants have been negligent either in the installation, maintenance or inspection of the pipe in question. As stated before, there is no contention by plaintiff that the pipe was negligently installed; hence, the negligence, if any, would have to be found in the City's failure to inspect the pipe. Plaintiff's entire case rests upon the theory that defendants were negligent in failing to make inspection of the pipe-line during a period of forty years to determine its condition. Plaintiff alleges there was a duty on the part of defendants to inspect and, if defendants did not inspect, they were negligent. Plaintiff admits, however, there was no reasonable manner in which the line could be adequately [87] inspected, other than to excavate the soil along the pipe-line and make physical inspection thereof.

The pipe-line was some ten feet beneath the surface of the ground. The break occurred in a lateral leading into the shed under a cement platform adjacent to Berth 59. To make an inspection, it would have been necessary for the City to excavate the line in its entirety, including the line under the cement

platform, which would mean the breaking of the cement platform to get to the pipe below.

According to the testimony of experts, graphitic corrosion occurs sporadically. Graphitic corrosion may occur on the top of the pipe and not on the bottom, or on one side and not the other. Graphitic corrosion may occur in one spot and then may not occur for many feet along the line. It would be necessary to excavate around the entire pipe to locate a corroded area. An examination of the upper half of the pipe would not be sufficient because graphitic corrosion could manifest itself on the lower portion of the pipe and not on the top or sides. To make complete inspection it would be necessary to remove the earth from beneath the line. The removal of earth from beneath the pipe would remove its support, putting a strain upon the pipe itself, and might cause a sinking or bending of the pipe, occasioning damage more extensive than the corrosion itself.

Testimony at the trial indicated the City of Los Angeles has adopted a "do nothing" policy regarding inspection of its water lines. It places water lines in the earth and then neither makes inspection nor replacement until leaks occur. When leaks develop they are repaired. When they become too numerous the pipe-line is replaced. [88]

Defendants contend that when the line was installed it was the best pipe available and that such cast-iron pipe will ordinarily last for many, many years. In fact, evidence indicated that in Pennsyl-

vania similar cast-iron pipe has been in use for more than 150 years in a non-corrosive soil.

If any policy has been adopted by municipalities in California, the policy is the same as that followed by the City of Los Angeles; that is, that after cast-iron water pipe is installed the line is used without inspection or replacement until there are sufficient breaks to indicate the pipe has corroded or has become undependable. Defendants contend there was nothing to indicate the break in question was imminent or the line undependable. In fact, the line was repaired and returned to use, and so far as this Court is informed is in use today.

Negligence is a question of fact to be determined from all the surrounding circumstances. Although it might have been desirable to make an inspection of the water lines every two or three years, such inspection would be prohibitively expensive and economically unfeasible. The City, like individuals, is required to take only reasonable precautions.

Although there is some evidence that in other parts of the harbor area there had been pipe failure because of graphitic corrosion, nevertheless, we are of the opinion that considering all the evidence in this case the City was not negligent in failing to inspect the pipe.

Judgment will be for defendants. Counsel for defendants shall prepare findings of fact, conclusions of law and judgment in accordance with the rule.

Dated: November 24, 1958.

/s/ HARRY C. WESTOVER,
United States District Judge.

[Endorsed]: Filed November 24, 1958. [89]

[Title of District Court and Cause.]

OBJECTIONS TO PROPOSED FINDINGS OF FACT

In accordance with F.R.C.P. Rules 46 and 52, plaintiff objects to the following Findings of Fact submitted by the defendant, City of Los Angeles:

1. Finding 3 is objected to. After finding that the shed was used “* * * for the receipt and shipment of goods to and from Los Angeles Harbor.” The proposed Findings go on to say that “The remaining allegations of paragraph III of the Second Amended Complaint are untrue * * *” The remaining portion of said paragraph III of the Second Amended Complaint provides that the shed in question was used “* * * for hire, for the receipt of merchandise in transit from various portions of the United States and of the world to various other portions of the United States and the world * * *” and that “* * * Said shed now is and at all times mentioned herein was used to store goods brought to Los Angeles by ship while awaiting [90] delivery of the same to the owners hereof.”

All of the underlined language is true, and is without contradiction in the evidence.

2. Defendant has submitted no proposed finding with respect to the allegations of Paragraph IV of the Second Amended Complaint, stating these allegations are immaterial. Said Paragraph IV describes the operation by the City of the terminal. There is no contradiction thereof in the evidence. This paragraph is material in that it relates to the City's duty of care. Therefore, the following finding is requested:

"The allegations of Paragraph IV of the Second Amended Complaint are found to be true."

3. Plaintiff objects to the following portions of Finding 5:

"The purpose of said pipe line and lateral was solely to furnish fire protection to the shed, its loading dock, its wharf, to ships moored at the wharf and to other property and appurtenances in the nearby vicinity."

Plaintiff requests that the quoted portion be amended as follows:

The purpose of said lateral was solely to furnish water to the overhead sprinkler system and the thirty-six hydrants to which fire hoses were attached in the transit shed.

The proposed Findings go on to say:

"The remaining allegations of paragraph V of the Second Amended Complaint are untrue."

That is objected to as contrary to the evidence.

4. Plaintiff objects to the following portion of proposed Finding 7: [91]

“The remaining allegations of paragraph VII are untrue.”

The remaining allegations referred to are the following:

“* * * Said bags of coffee were placed in said shed at the joint and in common invitation of defendant Outer Harbor and defendant City and for the benefit of both said defendants, pecuniarily and otherwise.”

The foregoing should be found to be true as to the City, there being no contradiction in the evidence with respect to it.

5. Plaintiff objects to Findings 8, 9, 11, 12, 13, 15, 16, 17, 18, 19, 21, 22, 23, 24 and 25 of the proposed Findings. Each of these findings relate to the capacity of, the duty of, care of and the negligence of the City. In place of them, it is proposed that the Court find as follows:

“That Paragraphs VIII, X, XI, XII and XIII of the First Cause of Action are true.”

“That Paragraphs III, IV, V, VI, VII and VIII of the Second Cause of Action are true.”

“That as to Paragraphs II, III, IV, V, VI and VII of the Third Cause of Action the City was not operating in a governmental capacity but the City had knowledge and reasonable opportunity to repair the dangerous and de-

fective condition of public property created by the corrosion decay of the pipe under the loading platform floor of the transit shed.”

In behalf of said objections, the following is submitted:

It is respectfully submitted that the evidence shows, without contradiction, that the City was operating a terminal in its proprietary capacity incident to the transportation of goods by common carriers at sea. As such, if it was not a carrier, it was [92] in a parallel situation and subject to the highest duty of care. The evidence also shows, without contradiction, that the soil at Berth 59 was highly corrosive; that cast-iron pipe has not been newly installed in such soil for at least twenty (20) years, because it is known to be unsuited to such soil; that pipes in the immediate vicinity had failed many years before, and that there had been numerous such failures in the Harbor area. The evidence also shows, without contradiction, that there was leakage from the pipes in question prior to the failure which did the damage. One of the City's own witnesses testified that such leakage calls for an inspection. Had there been an inspection, it can hardly be doubted that the corrosion that caused this failure would have been discovered. In contrast to this evidence, there was submitted only the proposition that public utilities generally do not dig up such pipes. It is submitted that such conduct on the part of the City is negligent, as against the owners

of the goods, for the reason that instead of exercising a high duty of care, no care at all is provided.

It is respectfully submitted that under the circumstances, the Findings proposed should be rejected, and Findings that the defendant was under a duty of care, and did nothing, thereby being guilty of negligence should be made; and that we be allowed to draft such findings in detail. If we may be allowed to use an analogy, we would submit that proof of a custom to drive automobiles without brakes, if there were such a custom, would not establish that such conduct is prudent, nor that it meets the standard of care imposed on a public organization occupying a position somewhere between that of a carrier and that of an ordinary bailee.

Dated: December 3, 1958.

Respectfully submitted,

McCUTCHEN, BLACK
HARNAGEL & SHEA,
PHILIP K. VERLEGER,
HOWARD J. PRIVETT,

By /s/ PHILIP K. VERLEGER,
Attorneys for Plaintiff.

Affidavit of service by mail attached.

[Endorsed]: Filed December 3, 1958.

In the District Court of the United States, Southern
District of California, Central Division

Civil No. 20624-HW

GRACE & CO. (Pacific Coast), a Corporation,
Plaintiff,

vs.

THE CITY OF LOS ANGELES, a Municipal
Corporation, et al.,
Defendants.

FINDINGS OF FACT, CONCLUSIONS OF
LAW, AND JUDGMENT

This cause came on for trial on October 7, 1958, Honorable Harry C. Westover, judge presiding. Plaintiff was represented by McCutchen, Black, Harnagel & Shea, by Philip K. Verleger, Esq., and Howard J. Privett, Esq., and defendant City of Los Angeles (sued herein as The City of Los Angeles), a municipal corporation, was represented by Roger Arnebergh, city attorney, Arthur W. Nordstrom, assistant city attorney, C. N. Perkins, deputy city attorney, and Trippet, Yoakum, Stearns & Ballantyne, by F. B. Yoakum, Jr., Esq., of counsel for City of Los Angeles. Prior to conclusion of the evidence and submission of the case, the action was, by written stipulation and written approval by the Court, dismissed by plaintiff against Outer Harbor Dock & Wharf Co. (also known as The Uniharbor Corporation), hereafter called "Uniharbor"; Uniharbor dismissed its alleged cause of action against plaintiff Grace & Co (Pacific Coast) and against

Grace Line, Inc., Grace Line Inc., and Uniharbor also [95] dismissed their causes of action against City of Los Angeles; thereafter the case proceeded to trial between Grace & Co. (Pacific Coast) and City of Los Angeles on plaintiff's Second Amended Complaint and the City of Los Angeles' Answer to plaintiff's Amended Complaint, the allegations of the Second Amended Complaint being deemed denied by the City of Los Angeles.

The Court having duly considered the evidence and the law, it now therefore makes its

Findings of Fact

1. Plaintiff Grace & Co. (Pacific Coast) is a corporation organized under the laws of the State of West Virginia and duly qualified to do business in California. Defendant City of Los Angeles (hereafter called "City") is a municipal corporation existing under the laws of California.

2. The Court has jurisdiction herein by virtue of section 1332 of the United States Judicial Code and Judiciary by virtue of the fact that this is an action between citizens of different states of the United States involving in excess of \$3,000.00 exclusive of interest and costs.

3. At all times mentioned in the Second Amended Complaint the City owned and operated by and through its Harbor Department a steel and concrete shed at Berth 59, Pier 1, Los Angeles Harbor, in that portion of Los Angeles County known as San Pedro; said shed was used for the receipt and shipment of goods to and from Los Angeles Harbor.

The remaining allegations of paragraph III of the Second Amended Complaint are untrue insofar as they refer to the City.

4. The Court makes no finding concerning the allegations of paragraph IV of the Second Amended Complaint for the reason that they are immaterial in view of the finding hereafter made that the City was not negligent.

5. The City, by and through its Harbor Department, at all times herein mentioned, maintained in the public street adjacent to the shed at Berth 59 an 8-inch cast-iron water pipe and an 8-inch lateral therefrom leading to said shed. Said pipe and lateral were installed by said Harbor Department about 1914 and at about the same time shed was constructed by the Harbor Department of the City. The purpose of said pipe line and lateral was solely to furnish fire protection to the shed, its loading dock, its wharf, to ships moored at the wharf and to other property and appurtenances in the nearby vicinity.

The remaining allegations of paragraph V of the Second Amended Complaint are untrue.

6. The Court makes no finding concerning the allegations of paragraph VI for the reason that defendant Uniharbor was dismissed from the action.

7. Plaintiff on March 12, 1956, was presumptively the owner of approximately 1960 bags of coffee which had been stored in said shed at Berth 59 after having been discharged by various vessels and

was awaiting delivery to plaintiff. The Court makes no finding concerning the ownership by plaintiff of any specific quantity of coffee for the reason that the trial herein was limited solely to the question of the liability of the City. Hence it was assumed only for the purpose of determining the question of liability that plaintiff owned 1960 bags of coffee.

The remaining allegations of paragraph VII are untrue.

8. The allegations of Paragraph VIII insofar as they refer to the City are untrue except that it is true that the City owned a cast iron pipe as more specifically found in paragraph 5 hereof.

9. The Court makes no finding concerning the allegations of paragraph IX for the reason that defendant Uniharbor was dismissed from the action.

10. Defendant City did not carelessly or negligently or otherwise omit or fail to provide a safe shed for the interim, or other storage, of any of plaintiff's goods for any of the reasons alleged in paragraph X of the Second Amended Complaint, or for any other reason.

The remaining allegations of paragraph X are untrue in so far as they refer to the City.

11. The allegations of paragraph XI of the Second Amended Complaint insofar as they refer to the City are untrue, except it is true that the City adopted a policy of not maintaining, repairing or replacing its buried water pipe lines until some trouble was reported or some evidence of leakage

developed. The Court finds that the City was not negligent in the maintenance of said cast iron water pipe.

12. It is true that on March 12, 1956, a large quantity of water escaped from the aforesaid 8-inch cast iron lateral pipe under a pressure of approximately 65 pounds per square inch, which water flooded the floor of the shed at Berth 59 and damaged the coffee which, for the purposes of these Findings, is assumed was owned by plaintiff. The Court makes no finding respecting the extent, if any, of damage to said coffee. It is untrue that said damage, if any, was caused by the negligence of the City.

The remaining allegations of paragraph XII of the Second Amended Complaint are untrue.

13. The allegations of paragraph XIII of the Second Amended Complaint are untrue and in this connection the Court finds that the City was not negligent in maintaining, operating or installing the pipe which burst on March 12, 1956, or in failing to keep an adequate or any watch at said shed or in failing to discover the leakage with reasonable speed, or in any other respect.

14. The allegations of paragraph XIV of the Second Amended Complaint are true.

15. It is true that the matters alleged in the [98] Second Amended Complaint are within the jurisdiction of this Court but all allegations contained herein are untrue except as herein expressly found to be true.

16. It is true that said 8-inch cast iron water pipe was installed by the Harbor Department of the City in 1914 as a part of a water fire line system which at all times mentioned in the Second Amended Complaint was under the control of and operated by the Harbor Department of the City solely for the purpose of providing water for fire fighting and fire prevention.

The remaining allegations of paragraph III of the Second Cause of Action are untrue.

17. The allegations of paragraph V of the Second Cause of Action are untrue, except as found in paragraph 11 hereof.

18. The allegations of paragraph VI of the Second Cause of Action are untrue.

19. It is untrue that the damage, if any, to the coffee assumed to be owned by plaintiff was caused by the negligence of the City in any respect whatever.

20. It is true that the City is a local agency under the definition and within the meaning of sections 53050 and 53051 of the Government Code of California; and that the shed at Berth 59, Pier 1, Los Angeles Harbor in that portion of Los Angeles County known as San Pedro, is and on March 12, 1956, was owned by the City and that said 8-inch cast iron water pipes installed beneath the streets outside of said shed and owned and operated by the Harbor Department of the City is public property under the definition of and within the meaning of

sections 53050 and 53051 of the Government Code of California.

The remaining allegations of paragraph II of the Third Cause of Action are untrue.

21. It is untrue that on or about March 12, 1956, or at any time prior thereto, the City or its Harbor Department planned, constructed, installed or maintained its said pipe line in a manner [99] or according to a design inherently, or otherwise, dangerous or defective for the intended use or the use made of said property. It is true that said cast iron pipe was installed about 1914 by the Harbor Department of the City and was buried approximately 9 to 10 feet underground and under a concrete floor or loading dock or platform and covered with a compacted dirt fill, and that the City followed a policy of not inspecting such buried pipe or replacing the same until some trouble was reported or some evidence of leakage developed.

The remaining allegations of paragraph III of the Third Cause of Action are untrue.

22. The allegations of paragraph IV of the Third Cause of Action are untrue.

23. The allegations of paragraph V of the Third Cause of Action are untrue.

24. The allegations of paragraph VI of the Third Cause of Action are untrue.

25. The allegations of paragraph VII of the Third Cause of Action are untrue except it is true that on

March 12, 1956, water escaped from said pipe, all as more particularly set forth in paragraph 12 hereof.

26. It is true that at all times mentioned in the Second Amended Complaint the Board of Harbor Commissioners of the City of Los Angeles was the duly constituted authority having jurisdiction, superintendence and control, under the provisions of the Charter of said City, of the Harbor Department, a branch of the government of said City, and the shed and pipe lines in and about Berth 59 at Los Angeles Harbor.

27. In view of the Findings heretofore made, the Court abstains from making any findings concerning the allegations contained in paragraphs IV, V or VI of the City's Second Separate and Distinct Answer and Defense to the Amended Complaint, in paragraphs [100] II and III of the City's Third Separate and Distinct Answer and Defense of the Amended Complaint, in paragraph II of the Fourth Separate and Distinct Answer and Defense of the City to the Amended Complaint, in paragraph II of the Fifth Separate and Distinct Defense and Answer of the City to the Amended Complaint, in paragraph II of the Sixth Separate and Distinct Defense and Answer of the City to the Amended Complaint, or in paragraph II of the Seventh Separate and Distinct Defense and Answer of the City to the Amended Complaint except to the extent that the Court has heretofore found that the City had no prior knowledge or notice of any de-

fective or dangerous condition in said water pipe. It is true that the City had no opportunity for a reasonable time or any time after acquiring notice or knowledge or receiving notice to remedy any condition existing in said water pipe or to take any action reasonably necessary to protect plaintiff against said condition after acquiring notice thereof.

28. All findings of fact hereinafter set forth under the heading "Conclusions of Law" are hereby incorporated in these Findings of Fact the same as if herein set forth in full.

Conclusions of Law

From the foregoing facts the Court concludes:

1. In all respects as set forth in the foregoing Findings of Fact.

2. This Court has jurisdiction of this cause.

3. All conclusions of law appearing under the heading "Findings of Fact" are incorporated in these Conclusions of Law the same as if herein set forth in full.

4. Defendant is entitled to judgment that plaintiff take nothing by this action as against it.

5. That judgment be entered accordingly. [101]

Judgment

In accordance with the foregoing Findings of Fact and Conclusions of Law,

It Is Hereby Ordered, Adjudged and Decreed:

That plaintiff take nothing by reason of its Second Amended Complaint herein, or any count hereof, and that defendant City of Los Angeles recover its costs herein incurred, which costs are hereby taxed in the sum of \$20.00.

The Clerk is ordered to enter this judgment forthwith.

Dated: December 3rd, 1958.

/s/ HARRY C. WESTOVER,
United States District Judge.

Lodged: November 28, 1958.

[Endorsed]: Filed and entered December 3, 1958.

[Title of District Court and Cause.]

NOTICE OF APPEAL
TO NINTH CIRCUIT COURT OF APPEAL
(Rule 73(b))

Notice Is Hereby Given that Grace & Co. (Pacific Coast), plaintiff above named, hereby appeals to the United States Court of Appeals for the Ninth Circuit from the final judgment entered in this action on December 3, 1958.

McCUTCHEN, BLACK,
HARNAGEL & SHEA,
PHILIP K. VERLEGER,

HOWARD J. PRIVETT;

By /s/ PHILIP K. VERLEGER,
Attorneys for Grace & Co.
(Pacific Coast).

Affidavit of service by mail attached.

[Endorsed]: Filed December 18, 1958. [104]

In the United States District Court, Southern
District of California, Central Division
Civil No. 20624-HW

GRACE & CO. (Pacific Coast), a Corporation,
Plaintiff,

vs.

THE CITY OF LOS ANGELES, a Municipal Corporation, et al.,

Defendants.

Honorable Harry C. Westover, Judge Presiding.

REPORTER'S TRANSCRIPT OF
PROCEEDINGS

Los Angeles, California

Tuesday, October 7, 1958

Appearances:

For the Plaintiff:

McCUTCHEN, BLACK, HARNAGEL &
SHEA, by

PHILIP K. VERLEGER, Esq., and
HOWARD J. PRIVETT, Esq.

For the Defendant City of Los Angeles:
ROGER ARNEBERGH,
City Attorney, by
C. N. PERKINS,
Deputy,
W. C. FOSTER,
Deputy, and
TRIPPET, YOAKUM, STEARNS &
BALLANTYNE, by
F. B. YOAKUM, JR., Esq.,
Of Counsel.

For the Defendant Uniharbor Corporation:
OVERTON, LYMAN & PRINCE, by
DAN BRENNAN, Esq.

For the Defendant Grace Line:
LILLICK, GEARY & McHOSE, by
L. ROBERT WOOD, Esq. [106]

The Clerk: Case No. 20624-HW Civil, Grace & Co. vs. The City of Los Angeles, et al., and also a third party complaint, Uniharbor Corporation vs. the Grace Line.

Appearing for the plaintiff Grace & Co., Mr. Philip K. Verleger and Mr. Howard Privett.

Appearing for the City of Los Angeles, Mr. C. N. Perkins, Mr. Frank Yoakum, and Mr. W. C. Foster.

Appearing for the Uniharbor Corporation, Mr. Dan Brennan.

Appearing for the Grace Line, L. Robert Wood.
All parties are present, your Honor.

Mr. Verleger: Ready for the plaintiff, your Honor.

Mr. Yoakum: Ready for the City, your Honor.

Mr. Wood: Ready for defendant Grace Line, your Honor.

Mr. Brennan: Ready.

The Court: You may proceed. I might say I have read and gone over your memorandum of points and authorities and I have read many of the cases. If you think it is necessary to make a statement, you may do so. I think I probably understand the issues involved.

Mr. Verleger: Your Honor, I think I would [4*] wish only to make a very brief observation or two simply for the purpose of physical orientation. We have prepared and the witnesses will refer to a sketch here.

The Clerk: Which has been marked Plaintiff's Exhibit 1 for identification.

(The exhibit referred to was marked as Plaintiff's Exhibit No. 1 for identification.)

Mr. Verleger: There are references in the briefs which have been filed to Berth 60, Berth 59 and Berth 58. Those appear on the sketch here, Berth 60 starting at the outboard end of the whole dock area, berth 59 in, and Berth 58. The area up above marked as the channel is the harbor and its waters and the area at the end is water.

There are references again to certain pipes and those are indicated in the area below Berth 59.

*Page numbering appearing at top of page of original Reporter's transcript of Record.

There are references in the briefs to Signal Street. That is the area between these squares marked as buildings here, and again when one passes to the other side, there is water on the other side. 22nd Street is down here.

I think with that, your Honor, we are prepared to go ahead and start. I don't know whether counsel desires to make an opening statement.

Mr. Yoakum: Your Honor please, we have marked for identification here what I would refer to as an orientation map of the entire area there. It is not in detail like that, [5] but I think it might well be put up on the board at this time.

The Court: You can do so if you can find a place to put it. You might turn the board around.

The Clerk: The map to which Mr. Yoakum refers has been marked for identification as Defendants' Exhibit A.

(The exhibit referred to was marked as Defendants' Exhibit A for identification.)

Mr. Verleger: If no one else desires to make a statement, we will start.

The Court: You may call your first witness.

Mr. Verleger: As our first witness and as an adverse witness and employee of Outer Harbor and Dock Company, I want to call Mr. Sebastian Miretti.

The Clerk: Subject to Rule 43(b), Mr. Verleger?

Mr. Verleger: Yes.

Mr. Yoakum: The defendant City of Los Angeles objects to the witness being called as an adverse witness as far as its position is concerned.

The Court: Overruled. [6]

SEBASTIAN MIRETTI

called as a witness by and on behalf of the plaintiff, under Rule 43(b), having been first duly sworn, was examined and testified as follows:

The Clerk: Will you please state your name?

The Witness: Sebastian Miretti.

The Clerk: And how do you spell your last name?

The Witness: M-i-r-e-t-t-i.

Direct Examination

By Mr. Verleger:

Q. Mr. Miretti, by whom are you employed?

A. Outer Harbor Dock and Wharf.

Q. For how long have you been employed by Outer Harbor Dock and Wharf?

A. It is going on to 10 years.

Q. Were you an employee of Outer Harbor Dock and Wharf on the morning of March 12, 1956?

A. Yes, sir.

Q. Will you tell us at about what time you came to work that day?

A. Well, it was just a few minutes before 6:00. What I mean by a few minutes is possibly 10 minutes.

Q. Can you tell us where you worked at that time?

A. At 10 minutes of 6:00 I go to Berth 53. [7]

Q. Let me step back a little bit. Generally, during that period of time, did you work at the Berths 60, 59 and this area over here, Berths 60, 59 and 58?

(Testimony of Sebastian Miretti.)

A. You mean the morning of March 12th?

Q. Generally, have you worked there through the last few years for Outer Harbor Dock and Wharf?

A. Yes, all over the place.

Q. Can you tell us what you did on the morning of March 12th?

A. The morning of March 12th I——

The Court: Just a minute. For the record, this is March 12th of what year?

The Witness: 1956. I rode to Berth 53. It is a routine that I do every morning. I make out the time cards for the day before. When I drove up there, there were two Customs Officers waiting for my arrival, as they know that each morning I usually drive up there. They had notified me of a water leak over on Berth 59.

Q. (By Mr. Verleger): Did Outer Harbor Dock and Wharf Company carry on terminal operations in Berth 59 at that time?

A. Yes, they did.

Q. Then after you talked to these Customs men, what did you do?

A. I got back in my car and drove to [8] Berth 59.

Q. What did you see?

A. I saw water pouring out of the low line doors.

The Clerk: I have marked for identification, your Honor, at this time Plaintiff's Exhibits 2 to 16, inclusive.

(The exhibits referred to were marked Plaintiff's Exhibits 2 to 16 for identification.)

(Testimony of Sebastian Miretti.)

(Mr. Verleger showing documents to counsel.)

Q. (By Mr. Verleger): I am going to show you Plaintiff's Exhibit 4 marked for identification and ask you whether you can tell us whether or not that is one of the areas you saw water coming out of.

A. Yes, it is.

Q. And is this door marked 17 here what you mean by one of the low line doors?

A. That is correct. That would be the east side.

Q. What did you do following the time when you made this observation?

A. Well, we have a small door there, Door 17, and I opened it, hoping to get to the telephone, we have a telephone inside, but the water was too deep, so I got back in my car and drove back to Berth 53, and called the fire department from there.

Q. Where was it, in what building was it that you saw this water that was too deep to go [9] through? A. In Berth 59.

Q. Can you describe for us very briefly what Berth 59 is? A. Yes. It is a transit shed.

Q. It is a building, is it not, that is approximately 100 feet wide and approximately 600 feet long? A. Correct.

Q. Was there water generally over the floor of that building? A. Yes, there was.

Q. At that time was the floor of that building entirely flat?

A. Well, I wouldn't say entirely flat. There were some low spots in it.

(Testimony of Sebastian Miretti.)

Q. Was it sunk in more in any particular part than any other?

A. Yes, about the center of the shed.

Q. The center of the shed was sunk in deeper than the rest, is that right? A. Yes.

Q. And the water was deeper in that part, I take it? A. Right.

Q. Do you have any idea how deep the water was generally?

A. I would say four to six inches in various [10] spots.

Q. Now, further than that, is this structure, Berth 60, 59 and 58, all essentially one building?

A. Yes, it is one building except for your fire walls in between.

Q. There are fire walls in between but otherwise it is all one structure, is that right?

A. Correct.

Q. What did you do after you observed this water in there?

A. I went back to Berth 53 and called the Fire Department.

Q. You called the Fire Department?

A. Yes, sir.

Q. Did you call anyone else?

A. Well, after I had driven back to Berth 59, I again went back to Berth 53 and called Mr. Berry.

Q. After you did those things, did anyone appear and do anything about this water?

A. Yes. The Fire Department was there, and also the Harbor Department.

(Testimony of Sebastian Miretti.)

Q. Some time later was the water turned off?

A. Yes, it was.

Q. Do you recollect about how long it took?

A. I would say approximately 45 minutes from the time I called. [11]

Q. Do you know where that water was turned off, where they turned it off? A. Yes, I do.

Q. Where did they turn the water off?

A. It would be what we call in between Berth 59 and 60, down at the bottom of the ramp.

Q. Could you tell where the water was coming from when you looked at all this water——

The Court: Just a minute. May I interrupt?

Mr. Verleger: Sure.

The Court: You say you got there about 10 minutes to 6:00 in the morning?

The Witness: Yes, sir.

The Court: Do you know what time it was when you first called the Fire Department?

The Witness: I would say it was about 6:00 o'clock, your Honor.

The Court: About 6:00 o'clock?

The Witness: Yes.

The Court: Then you say the Fire Department did not get there until about 45 minutes later?

The Witness: No. That's the time the water was turned off.

The Court: When did the Fire Department arrive, then? [12]

The Witness: Well, they arrived immediately

(Testimony of Sebastian Miretti.)

A. Correct.

Q. During this period have you noticed that various areas in the floor of the three buildings there had settled from time to time? A. Yes.

Q. So far as you know, during that period had any of the dirt under the dock there been washed out by the action of the bay?

A. No, I don't know. I couldn't say yes to that.

Q. One further question. During the period you worked there—well, there is within that large structure a sprinkler system, is that right? [15]

A. Yes, there is.

Q. And there are also a number of small fire lines around the inside of the building, that is, fire hoses, is that right?

A. Yes, there is, every 50 feet.

Q. Have you ever known a longshoreman to shoot water around the place from the fire hose?

A. No. It would be impossible, because if you turn the water on, your alarm goes off.

Mr. Yoakum: I move to strike everything after the answer, "No, sir," as a conclusion of the witness.

The Court: Denied.

Q. (By Mr. Verleger): During the period you have worked there, have you ever seen water come out from either the sprinkler system or the hoses while you were around there?

A. No, I never have.

Q. So that there is no water from that system that has come out that has been released onto the surface in your experience, is that right?

(Testimony of Sebastian Miretti.)

A. No, sir. That is correct.

Mr. Verleger: No further questions of this witness.

The Court: May I ask another question?

Mr. Verleger: Yes. [16]

The Court: During the nine years you worked in this locality, did you ever notice any of the pipe leaking?

The Witness: No, I haven't, your Honor.

The Court: You didn't see any escaping water from anywhere?

The Witness: I never have seen escaping water.

The Court: All right.

The Witness: Except the morning of March 12th.

The Clerk: At this time, your Honor, there have been marked for identification Plaintiff's Exhibits 17 to 20, inclusive, and also the City of Los Angeles Exhibits B to F, inclusive.

(The exhibits referred to were marked as Plaintiff's Exhibits 17, 18, 19 and 20 for identification.)

(The exhibits referred to were marked Defendant City of Los Angeles Exhibits B, C, D, E and F for identification.)

Mr. Verleger: I do have a couple of further questions, your Honor, that I forgot. May I go ahead?

The Court: Yes.

Mr. Yoakum: If the court please, is it proper

(Testimony of Sebastian Miretti.)

when counsel is interrogating over a document to go up there with counsel?

The Court: Oh, yes.

Q. (By Mr. Verleger): After the water had been turned off, a little later on [17] did part of the floor in Berth 59 fall in? A. Yes, it did.

Q. I have a number of pictures here that show what the place looked like at various times. Could you look at each one of them and tell me whether this is—first, I refer you to Plaintiff's Exhibit 14. Does that appear to you to be a picture of the interior of Berth 59 during part of that day?

A. Yes, it is.

The Court: What was the number of that?

The Witness: 14.

Q. (By Mr. Verleger): Next I refer to you a picture, Exhibit 9. Does that also appear to be a picture of the place?

A. Yes. That is Berth 59.

Q. One further question. At the time you saw the building was there more water or less than appears in these pictures?

A. There was more water.

Q. In other words, at the time these were taken, there was less, some of the water had been mopped up?

A. Yes, because you have pumps here pumping it up.

Q. Next I refer you to a picture which is Exhibit No. 8. Does that show again part of Berth 59 in

(Testimony of Sebastian Miretti.)

the condition it was after this water had arrived there? A. Yes, it is.

Q. In order to speed this up a little, I will [18] refer to Exhibits Nos. 5, 6 and 7. Are they likewise such pictures?

A. Yes, sir. That is all Berth 59.

Q. There is a picture here, which is Exhibit No. 16, and that is also Berth 59? A. Yes.

Q. That is looking a long ways down the building, is it not? A. Yes.

Q. Here we have Exhibits 12 and 11. These show holes in the floor of the building.

A. Correct. That is when it caved in.

Q. Did it cave in immediately or a little later?

A. How do you mean "immediately"?

Q. I mean was it caved in as soon as the water was cleaned up, or did the floor actually fall in a little bit later? A. It fell in a little bit later.

Q. Do you happen to remember about what time it fell in?

A. Roughly guessing, I would say around 9:30.

Mr. Yoakum: If it is a guess, I move to strike it as not proper.

The Court: Denied.

Q. (By Mr. Verleger): Finally, we have four here, which are numbered 15, [19] 2, 3 and 10. Do these also show the hole which developed in the floor in Berth 59? A. Yes, this is the hole.

The Court: I might say, counsel, the negligence here is not the fact that the floor collapsed, but the negligence is the allowing of the water to escape.

(Testimony of Sebastian Miretti.)

Mr. Verleger: I think that's right, your Honor. I think the only effect these pictures have is to give a picture of the whole thing which occurred.

The Court: All right.

Mr. Verleger: With that in mind, your Honor, I would like to offer these photographs in evidence at this time.

Mr. Yoakum: To which we object severally and collectively on the ground that they don't tend to establish any negligence at all on the part of the defendant. As the court remarked, it is the bursting of the pipe and the flooding that is alleged to have caused the damage. Some of these pictures were taken subsequent—all of them were taken after the event.

The Court: That is probably true. From a technical standpoint, I think you are right. However, I am going to overrule the objection. I don't think you are harmed by their coming in at all. They do give some idea of the damage that occurred. It may be helpful if we get to the question of damage. Objection overruled. [20]

The Clerk: The following exhibits have been admitted into evidence: 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15 and 16.

(The exhibits referred to were received in evidence and marked as Plaintiff's Exhibits 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15 and 16.)

Mr. Verleger: No further questions of this witness, your Honor.

The Court: Cross-examine.

(Testimony of Sebastian Miretti.)

Mr. Yoakum: What is the court's pleasure as to the order of cross-examination?

The Court: I don't care just so we can have some routine and stick to it. The clerk may have some ideas on how he can keep track of you.

The Clerk: It doesn't make any difference to me, your Honor. I can keep track of them.

The Court: But whatever sequence you establish, will you continue that throughout the trial?

Mr. Wood: I would suggest the City and then the Outer Harbor and then the Grace Line.

The Court: That is all right with me.

Cross-Examination

By Mr. Yoakum:

Q. Do I pronounce your name correctly Miretti?

A. Miretti.

Q. Pardon me if I sometimes mispronounce it. I assure you I won't do it intentionally.

A. That's all right.

Q. Where was your actual place of business down there, Mr. Miretti? You say you were a gear foreman?

A. Correct.

Q. Where did you work?

A. I worked in the Outer Harbor.

Q. I mean did you have a special location down there where you had your office?

A. Well, yes.

Q. Where was that?

A. At that time our office was at Berth 53.

Q. Where was 53 from 59?

(Testimony of Sebastian Miretti.)

A. It is right across the channel.

Q. Across the east channel or the main channel?

A. The east channel.

Q. How far would that be by driving?

A. By driving I would say it is about, oh, less than a quarter of a mile.

Q. What would be your occasions for going over to Berth 59?

A. Well, I go there to gasoline the equipment.

Q. The equipment that the Outer Harbor Company uses [22] in its stevedoring operations?

A. Correct.

Q. You say that the water was turned off between Berth 59 and Berth 60?

A. I didn't say 60 that it was turned off. I say that is where they turned the water off is between Berth 60 and 59.

Q. I wonder if you would be kind enough to indicate on this drawing marked Exhibit 1 for identification the location of this turn-off that you saw that morning. Indicate it by a pointer. Will you stand to one side, please?

A. You don't show any ramp here. Is this what——

Q. It hasn't been identified, but I take it this is Signal Street running down here between Berth 60 and what appears to be Berth 68. That is the main street.

A. If this is a street, it is right in here.

The Court: Speak up so I can hear you.

The Witness: Right in here (indicating).

(Testimony of Sebastian Miretti.)

Q. (By Mr. Yoakum): Will you please make a little mark for that? Just make a black X where you observed this turn-off.

A. (Witness complying.)

Q. Now, then, I would like to make a notation here so that may be kept permanent. The arrow will indicate the place where you say the water was turned off on the morning in question. [23]

The Court: Let's mark that M-1.

Mr. Yoakum: M-1, all right, your Honor. (Counsel marking on exhibit.)

Q. Did you call the Harbor Department?

A. I called the Fire Department.

Q. You did not call the Harbor Department?

A. No, sir.

Q. You say that the Harbor Department man arrived about the same time the Fire Department arrived?

A. To my best knowledge, yes, sir.

Q. Did you recognize the man from the Harbor Department?

A. No, I didn't recognize any certain man. I just recognized the automobiles.

Q. Did you talk to him?

A. No, sir, I didn't.

Q. Did you make any effort to turn off the water?

A. No, sir.

Q. Why didn't you try to turn it off?

A. I wouldn't have the proper tools to turn the water off.

Q. Did you watch the man turn off the water?

A. From a distance, yes, I did.

(Testimony of Sebastian Miretti.)

Q. Where were you at the time you saw him turn it off? [24]

A. I would say about Door 17 on the low line of Berth 59.

Q. Would Door 17 be approximately where I am pointing (indicating)?

A. Yes, it would be approximately right there.

Q. Would it be fair to put a cross there?

A. I think so.

Mr. Yoakum: We will call that M-2, your Honor.

The Court: All right, M-2.

Q. (By Mr. Yoakum): What is the first thing you saw this person from the Harbor Department do upon arrival?

A. The first thing, they had their boots on and waded there in the water, out there in the water, trying to find the location of this manhole where they cut the water off.

Q. Did you observe him all the time from the time of his arrival until the time that the water was turned off?

A. No, sir. About that time I went back to Berth 53 and notified Mr. Berry of the water in Berth 59.

Q. Did you move back to Berth 53 before he turned the water off?

A. No. I was still at Berth 59.

Q. What time did you leave Berth 59?

A. The second time I would say about 6:30.

Q. Let's see. The first time is when you arrived and then saw water and then you went to telephone the Fire [25] Department?

(Testimony of Sebastian Miretti.)

A. Correct. I went back to Berth 53 to telephone the Fire Department.

Q. Then your second departure was at about 6:30? A. Yes, roughly guessing.

Q. And the water had not been turned off at that time, is that your testimony?

A. At 6:30 I would say the water was being turned off. About 6:45 I think the water was completely off.

The Court: Did it take 15 minutes to turn off the water?

The Witness: It is pretty hard to find out there.

Q. (By Mr. Yoakum): Do I understand you weren't there when the water was turned off?

A. I was there when they were lowering their long-handled wrench down into the manhole.

Q. How many men were there doing this?

A. There were several men. There was the Fire Department and the Harbor Department.

Q. From what you observed, were they working all the time? A. Yes, they were.

Q. Your best judgment is that you left there the second time at about 6:30? [26]

A. Yes, I would say.

Q. Now, when did you come back again?

A. If I remember correctly, I came right back with about 50 bags of sawdust.

Q. At what time?

A. Oh, I would say about 6:35, 6:40.

Q. Was the water turned off yet?

(Testimony of Sebastian Miretti.)

A. At about 6:35 it had stopped bubbling out of the dock.

Q. It bubbled after it was turned off, didn't it?

A. Very little. There were signs that the water had been turned off.

Q. After you returned with the sawdust, how long did you stay there?

A. I stayed there quite a while.

Q. Give me, please, an estimate in time.

A. Oh, I would say until 10:30, 11:00 o'clock. But, of course, I was in and out of there all the time to get equipment for the emergency gang that we had ordered out, such as gloves, aprons, boots. You see, our main gear room is over at Berth 53.

Q. Now I am getting something clear that I didn't understand. When you say gear, you mean paraphernalia for working?

A. Equipment? [27]

Q. You don't mean gears? A. Equipment.

Q. I beg your pardon. I misunderstood that. Now, when you came back here at about 6:40 with the sawdust, did you come and go?

A. Yes, I did come and go.

Q. So you were back and forth maybe several more times? A. Yes, I was.

Q. You say you were getting paraphernalia and gear. What was that for?

A. Well, that is for the emergency gang that had been ordered out. We had to furnish them with boots, gloves and aprons.

Q. Do you know who ordered the gang out?

(Testimony of Sebastian Miretti.)

A. Mr. Gorman ordered the gangs out.

Q. Will you spell that name for me?

A. G-o-r-m-a-n.

Q. Who is Mr. Gorman?

A. He is superintendent at the Outer Harbor.

Q. Do you know how he heard of this situation?

A. Well, Mr. Gorman gets to work at about 7:00 o'clock and he heard it through me.

Q. You saw him at about 7:00 and told him there had been a break? [28]

A. Yes. Not only that, but he could see all the commotion down at Berth 59 from where he comes to work.

Q. Were you there with Mr. Gorman when he ordered the crew out?

A. No, I don't remember that I was, no.

Q. Do you know whether anybody from the Grace Company asked the crew to come in there?

A. No, I don't.

Q. As a matter of fact, didn't Mr. Gorman order the crew out on his own initiative?

The Court: Counsel, how would this witness know that?

Mr. Yoakum: He might know it from something Mr. Gorman said.

The Court: He can testify what Mr. Gorman did, but I don't think he can testify what Mr. Gorman was thinking. Then there is another matter. I think the issue before the court at this time is whether there is any negligence on the part of the City relative to allowing the pipeline to deteriorate and

(Testimony of Sebastian Miretti.)

to burst. It seems to me that anything that happened after that is rather immaterial unless it throws some light upon the question of damage. We are not concerned with damage at this particular time.

Mr. Yoakum: Well, it may have something to do with liability, your Honor. In this case the Outer Harbor [29] Company—everybody seems to be suing everybody else here. As you have observed, the Outer Harbor is suing the City of Los Angeles because Outer Harbor didn't get paid for some stevedoring operation they claim we owe them.

The Court: Is that what you are trying to go into now, the question of whether or not there is any liability to pay for this mopping up operation?

Mr. Yoakum: Yes.

The Court: Of course, you are clear outside the direct examination, because there was no testimony on this line at all on direct examination. Of course, there hasn't been an objection and it may come in. I suppose it might as well come in now as later.

Mr. Yoakum: That is what I thought. If no one had any objection, maybe we can cover this now.

The Court: All right. You proceed.

Mr. Yoakum: Mr. Brennan, counsel for Outer Harbor, is willing to make a stipulation that his company ordered the longshoremen out on its own initiative, without the request of anyone.

Mr. Brennan: We are prepared to so stipulate, your Honor.

The Court: Such may be the stipulation.

Q. (By Mr. Yoakum): Now, Mr. Miretti, did

(Testimony of Sebastian Miretti.)

you supervise the operation [30] that took place within a transit shed after your crew or gang got there? A. No.

Q. You were in and out frequently, though?

A. Yes, sir.

Q. And you observed what they were doing?

A. Yes.

Q. Can you just tell us briefly what they did?

A. Are you speaking of the stevedore gangs?

Q. I am speaking of the crew that the Outer Harbor ordered out to meet this situation.

A. Yes.

Q. Is it correct to call them stevedores?

A. Yes. I got the lift jitneys.

Q. Sir?

A. I call them lift jitneys, that is the motorized equipment with blades on it that picks up things.

Q. Is that something like a fork lift?

A. Yes. I'm sorry. I should have said fork lifts, and the pallet boards that go with it. Then they had these fork lift drivers, and the dock gangs would take the dry cargo and put it on one board and the wet cargo on another, and drive it into a dry spot.

Q. How many of these fork lifts were used in that operation? [31]. A. I had three there.

Q. Were there any more?

A. I had plenty more outside.

Q. I mean were only three used?

A. If I remember rightly, I think there were three gangs ordered out.

(Testimony of Sebastian Miretti.)

Q. What did one of these things weigh?

A. They weigh from 7,900 to 10,000 pounds.

Q. Over what area in Shed 59 did these lifts operate during this period right after the emergency?

Where are those pictures?

The Clerk: They are all in there.

Mr. Yoakum: Well, let's withdraw that question and I will get at it in a little different way.

Q. I am showing you now No. 16, which is that long view of the shed. Now, these bags we see in the foreground, are they in Shed 59?

A. Yes, that is Shed 59.

Q. Is that the way they were before you started moving them?

The Court: May I inquire, is that the coffee bags in question?

The Witness: Yes, these are the coffee bags.

Mr. Yoakum: I don't know whether they are the ones in question. [32]

The Court: If it is not the coffee bags, then it is immaterial what happened to the other merchandise.

Mr. Yoakum: Well, your Honor, I think that the court has it clearly in mind, but counsel for plaintiff apparently seems to make some contention that there was some dereliction on the part of the City because this floor caved in in there.

The Court: Counsel may be able to show the building was negligently constructed, but the mov-

(Testimony of Sebastian Miretti.)

ing of the bags certainly doesn't indicate it was or was not negligently constructed.

Mr. Yoakum: What they did may indicate what caused something to happen there, though.

The Court: May I inquire, how much is involved in this stevedoring transaction?

Mr. Yoakum: You mean money?

The Court: The amount of money involved. How much is the Outer Harbor trying to get back?

Mr. Brennan: I think it is a total of around \$5,000. The amount in this action is considerably less.

The Court: I mean in this action. How much are you asking for in this action?

Mr. Verleger: I think it is \$1,250. I'm sorry. The total counterclaim against the City of Los Angeles for Uniharbor seems to be \$3,553.92, of which \$1,213 seems to be moving expense. [33]

The Court: That's all right. \$3,000. Now, I don't know, Mr. Plaintiff. Your claim of negligence is based on the fact that the City allowed these pipes to remain in the ground for such a long period of time that they deteriorated and burst. Is there any other claim of negligence of any kind?

Mr. Verleger: Your Honor, all of our claims relate to that one thing. The question of meter readings—I think the floor and things of that sort, but, basically, that is our claim.

The Court: You are not claiming any negligence, as far as I know, because of the fact that

(Testimony of Sebastian Miretti.)

the bags of coffee weren't moved properly or weren't handled properly or weren't dried out, they didn't use enough men, or anything like that. You aren't claiming that.

Mr. Verleger: No. I think we may have a feeling in view of the ancientness of the pipe, the City should have had someone ready to turn the water off just a little bit quicker, but the main claim, when you come down to it, your Honor, is that the pipe——

The Court: Maybe they should have had a guard down there night and day with searchlights. I don't know.

Mr. Verleger: If they didn't want to replace the pipe, your Honor, I think they ought to take some precautions [34] accordingly, but the main claim is the pipe shouldn't have been allowed to break.

The Court: I allowed these pictures to come in. I thought they were immaterial and I still think so, but I allowed them to come in, but if you are going into extensive cross-examination I think I will reverse myself and keep them out, because I don't think they have a thing in the world to do with the question of negligence. I don't think the plaintiff is concerned with them. It may be that the City and the Outer Dock has some concern or maybe the City will claim \$3,000 was too much to pay for this kind of work. I don't know.

(Testimony of Sebastian Miretti.)

Mr. Brennan: I didn't know we were going to get into that issue.

The Court: I didn't know we were, either.

Mr. Yoakum: The plaintiff introduced the photos for some reason which I presume he thinks helps his case.

Mr. Verleger: Your Honor, sometimes in a lawsuit I think it helps to just have a picture of what happened. That's all I have in mind with the pictures.

The Court: Well, I don't think the pictures have anything to do with the question of liability in this case. They show the situation that existed in the inside of the shed after the water had been allowed to escape and probably after it was turned off. [35]

Mr. Verleger: I think they may have this much further materiality, your Honor, that is, that they give a picture of the use to which the property was put, which I think is material on the duty and care, but I think there is no real question about what the property was used for anyway, so that if the pictures are going to extend the trial too much, I am perfectly prepared to stipulate they be withdrawn.

Mr. Yoakum: I wanted to suggest a stipulation in order to eliminate further questions about the pictures, a disclaimer of any negligence on the part of the City with reference to the soil under that transit shed. I am not talking about the main-

(Testimony of Sebastian Miretti.)

tenance of the pipe, because that wasn't under the transit shed.

The Court: I know, but the pictures don't show anything about the soil underneath the shed. The pictures show that the soil gave way and the floor collapsed. What caused that floor to collapse, I don't know.

Mr. Yoakum: That is what we are going to show.

The Court: This witness certainly couldn't testify to it.

Mr. Yoakum: He can testify as to 10,000-pound lifts running around over that floor with knowledge that there had been a big flood. If I am allowed to develop it, you will see what caused the floor to collapse.

The Court: Is there an objection? Well, I [36] will make an objection. If counsel doesn't want to object, I will. I think it is immaterial.

Mr. Yoakum: I will make an offer to prove by this witness, if he is permitted to answer this line of interrogation, that he would testify that these fork lifts were running all over the floor of that shed and into the very area where the floor eventually gave way, that they had knowledge of the fact that there had been water running for some time, large quantities of it, and notwithstanding that, they continued to use these heavy pieces of equipment over this floor, and that they were admonished to stop running the equipment over the area where it collapsed.

(Testimony of Sebastian Miretti.)

The Witness: There is a correction there. In your picture it shows some fences that I brought out there to keep the equipment off the cracked floor.

The Court: Just a minute. I'm sorry, but you can't object to what counsel say. Counsel might object to what you say, but you can't object. Not only that, but is anybody suing anybody because they allowed the equipment to go upon the floor and the floor collapsed?

Mr. Yoakum: The plaintiff is apparently suing us because the floor collapsed.

The Court: I don't think so at all. The plaintiff isn't suing you for that. The plaintiff is suing you because somebody allowed the water to [37] escape.

Mr. Yoakum: I wish he would say it with that kind of frankness.

The Court: I will say it for him, if he doesn't say it. I think that is the issue. I don't think this line of questioning has a thing in the world to do with the issues before the court.

Mr. Yoakum: Very well. Nothing further.

Mr. Brennan: We have no questions.

Mr. Perkins: Are the photographs withdrawn from evidence?

The Court: No, they haven't been withdrawn, but counsel has made a motion. I see no objection to them staying in or to their being withdrawn. If you want them out, I will take them out.

Mr. Yoakum: I think they ought to go out.

The Court: All right. I will reverse myself and

(Testimony of Sebastian Miretti.)

sustain the objection. The exhibits from 2 to 16 are out.

The Clerk: 13 is missing, so it is 2 to 12 and 14 to 16.

The Court: Yes, that's right, 13 hasn't been offered yet.

(The exhibits referred to, Plaintiff's Exhibits 2 to 12 and 14 to 16 were withdrawn.)

Mr. Yoakum: 13 hasn't been offered?

Mr. Verleger: That's right. [38]

The Court: Well, it's nearly 11:00 o'clock. Ordinarily we are very prompt in this court about taking recesses and about beginning on time. We usually take a recess at 11:00 o'clock of 10 or 15 minutes and quit promptly at 12:00, unless there is some urgency, and we won't resume until 2:00 o'clock in the afternoon. Unless there is some urgency, we usually quit at 4:00 in the afternoon. I do that because I know we have busy counsel here and they have other matters in their office, they have other business they want to take care of, and maybe if you can get away at 4:00 o'clock you can still go down and do some other business.

Court will now stand in recess until five minutes after 11:00.

(Recess.)

The Clerk: All parties are present, sir.

Mr. Wood: If the court please, I have the last. None of us cares to ask any questions.

Mr. Verleger: No redirect.

The Court: May this witness be excused?

Mr. Verleger: He may be excused as far as I am concerned.

Mr. Brennan: We will make him available any time during the trial.

Mr. Verleger: First I would like to read a few answers to interrogatories into the record. [39]

Mr. Yoakum: We may object to them on the ground that they weren't answered by a person occupying the status of one——

The Court: Will you tell me when the interrogatories were filed so that I can find that in the files? The only way I can find them is by the date.

Mr. Verleger: The answers were filed, I think, on 1-7-57.

Mr. Yoakum: 1-15-57.

Mr. Verleger: 1-15-57, that's right.

The Court: All right, 1-15. What interrogatory are you referring to?

Mr. Verleger: First I want to read in the answer to the first interrogatory, which commences on page 2, line 14.

Mr. Yoakum: Before Mr. Verleger proceeds, I would like to offer an objection on the ground that this interrogatory was not answered by a party or an officer, director, or managing agent of the party.

The Court: Why wasn't it? It was supposed to be. Where is the notice for the interrogatory? If it wasn't answered by the right party, whose fault is it? Is it the plaintiff's fault?

Mr. Yoakum: The party answered it who had the best available source of information, your Honor, for those [40] questions. The managing agent was available and they took his deposition.

The Court: Let's have the original interrogatories. When were they filed?

Mr. Yoakum: We received them on November 27, 1956, your Honor.

The Court: I have here Interrogatories Propounded to Defendant by Plaintiff, November 4, 1956.

"To the City of Los Angeles, Defendant:

"Pursuant to Rule 33 of the Federal Rules of Civil Procedure, the plaintiff requests that the following interrogatories be answered under oath by any of your officers competent to testify in your behalf who knows the facts about which inquiry is made and the answers be served upon plaintiff within 15 days from the time these interrogatories are served on you:"

Now, you have given them to the wrong man and you object to it? Can you give them to the wrong man to make the answer and then object?

Mr. Yoakum: We gave them to the man that had the information or the sources of it. The other man couldn't have answered them, we don't think.

The Court: The objection is overruled. Read the interrogatory and the answer both.

Mr. Verleger: "Interrogatory No. 1. [41]

"(a) State whether or not the City of Los Angeles owned Berth 59, Pier 1, Los Angeles Harbor * * *"

There is no dispute the City owned Berth 59, I take it, counsel, is that correct?

The Court: If you want to read the interrogatories, read the interrogatory and then read the answer. Go ahead in the proper way and keep the record straight.

Mr. Verleger: All right.

“State whether or not the City of Los Angeles owned Berth 59, Pier 1, Los Angeles Harbor, together with the buildings situate at said Berth 59, on or about March 12, 1956.”

The answer to that is:

“(a) Yes, the City of Los Angeles owned Berth 59, Pier 1, at Los Angeles Harbor, together with the buildings situate at said Berth 59, on or about March 12, 1956.”

“(b) State whether or not the City of Los Angeles maintained and kept in repair the facility of said Berth 59, including any and all water piping beneath said Berth 59, on or about March 12, 1956.”

The answer is:

“Yes, the City of Los Angeles maintained and kept in repair the facility of said Berth 59, including any and all water piping beneath said Berth 59, on or about March 12, 1956, at such times and in such places as it became [42] aware that such maintenance work was necessary in order to keep said water piping in good operating condition; such maintenance does not include digging up paving in order to inspect underground piping beneath buildings in order to determine the condition of water piping located thereat unless water is found above

ground, indicating evidence of a possible leak in the piping installed below ground.”

The next part of the interrogatory is:

“(c) If any person other than the City of Los Angeles maintained said berth, including said water piping, on or about March 12, 1956, state who said person was, what the work done by said person was, and whether or not said work was done under contract with the City of Los Angeles.”

The answer is:

“No person, firm or corporation other than the City of Los Angeles maintained said berth, including said water piping, on or about March 12, 1956.”

The next Interrogatory No. II.

“(a) State whether or not the warehouse or shed upon said Berth 59, including the foundation and the substructure of the same, was erected by the City of Los Angeles.”

The answer is:

“The transit shed located at said Berth 59, including the foundation and the substructure of the same, was erected by the Harbor Department of the City of Los Angeles.” [43]

“(b) If the said structure was erected by any other person under contract to the City of Los Angeles, state who said person is.”

The answer to that is:

“(b) The transit shed at Berth 59, including the foundation and substructure of the same, was erected by the City of Los Angeles; certain parts of the construction work were performed by subcontractors, such as the paving on the wharf by Griffith

and Company; the material for the exterior walls of the transit shed by Johns-Manville Company; the wharf and shed footings, including the bulkhead, anchors, riprap, and foundation were erected by Snare and Tviest, contractors; steel work was erected by Llewellyn Iron Works, contractors. No records are available indicating the identity of the contractors who made the earth fill or who poured the concrete floor slab. The original flooring in the transit shed was of timber construction, which was replaced with a concrete floor slab poured in black iron mesh, laid on top of a compacted earth fill.”

The next I have is for III(a), and the question is——

Mr. Yoakum: You skipped some.

Mr. Verleger: I am not offering all of this, if the court please.

The Court: Do you want the rest of that interrogatory? [44]

Mr. Yoakum: I think it ought to be in.

The Court: Read the rest of the interrogatory.

Mr. Verleger: All right.

“(c) State whether or not the City of Los Angeles has in its possession the plans or blueprints of said Berth 59, including:

“1. Plans of the foundation and substructure of said Berth 59, including specifications as to fill, if any; and

“2. Plans of any and all piping beneath said Berth 59.”

The answer is:

“Plans of the foundation and substructure of

said Berth 59, numbered 1263 and 1170-B, are available and blueprints of the same will be supplied upon request.

“2. Plans of piping beneath the transit shed at Berth 59, including plans of the sprinkler system supplying said shed, numbered 6211 and 1340, are available and will be supplied upon request.”

Now we get to III(a).

“State when said Berth 59 was originally constructed.”

The answer to that is:

“Berth 59 was originally constructed during or about the year 1914. [45]

“(b) State whether or not any alterations have since been made in said Berth 59, including alterations as to the foundation and the piping beneath said Berth 59.”

The answer is:

“(b) No alterations have been made in said Berth 59 to the foundation or the piping beneath said berth since the transit shed located thereon was first constructed, except as noted in II(b).”

(c) State whether the City of Los Angeles has plans and blueprints for any and all such changes.”

And the answer:

“(c) No plans or blueprints of any changes are in the possession of the City of Los Angeles, nor are any plans available for the concrete slab floor.”

“Interrogatory No. IV.

“(a) (1) State whether or not the floor of the warehouse of said Berth 59 consists of concrete without reinforcing, and approximately 6 inches thick.”

And the answer is:

“The floor of the transit shed at said Berth 59 consists of concrete reinforced with standard black iron mesh, and said floor is approximately six inches thick.”

“(2) If the floor is otherwise constructed, describe said construction.”

“(2) The floor was not otherwise constructed as of [46] March 12, 1956, except for minor repairs made with bitumastic concrete.”

“(3) State for what loading, including ‘live’ and ‘dead’ loads, the floor was designed.”

The answer is:

“The floor was designed for 400 pounds per square foot loading, including both ‘live’ and ‘dead’ loads.

“(b) State whether or not said floor slab is supported by a compacted dirt fill contained between a retaining wall on the water side of said berth and a retaining wall on the landward side.”

“(b) Said floor slab is supported by a compacted dirt fill to a depth of four to five feet contained between a concrete sheet pile bulkhead wall on the water side of said berth and a standard concrete retaining wall on the land side.”

“(c) State from where the dirt which was used for any fill beneath the floor of said Berth 59 was obtained.”

The answer is:

“(c) The original source of this dirt fill is unknown and is not designated in Harbor Department records.”

Your Honor, there are a number of these where there are only short portions that I am interested in and if we are going to——

The Court: I think if you read any part of an interrogatory, [47] you ought to read it all.

Mr. Verleger: Very well, your Honor.

Interrogatory V is:

“State whether or not on or about March 12, 1956, a quantity of water escaped from a water pipe beneath said Berth 59.”

The answer is:

“Yes, water was reported to Harbor Department representatives leaking beneath the platform on the land side of the shed, at or about 6:00 a.m., March 12, 1956, and the water pipe beneath the transit shed was shut off at or about 6:45 a.m.”

“(b) State whether or not said water reached the surface of the floor, and damaged commodities then in the shed at said Berth 59.”

The answer is:

“(b) Yes, at the time Harbor Department maintenance men arrived at the shed, water had reached the surface of the floor and had wet commodities then in the shed at said Berth 59.”

“(c) State fully how, so far as the City knows, said water escaped from said pipe.”

The answer is:

“(c) The pipe beneath the loading platform on the land side under paving and approximately eight or nine feet [48] below the level of the transit shed floor and outside the shed burst and water escaped therefrom.”

“(d) State fully in what manner the water from said pipe reached the surface of said floor.”

The answer is:

“(d) The water was forced up through the dirt fill under the loading dock floor and apparently through an opening between the loading dock floor and the transit shed foundation inside the building, some of the water flowing out over the top of the loading dock into the street and some of the water flowing down into the center of the transit shed floor.”

“(e) State whether or not a portion of the floor of said shed collapsed following the escape of said water.”

The answer is:

“(e) Yes, an area approximately 20 by 40 feet of the shed floor collapsed.”

“(f) State in what manner the escape of said water brought about the failure of said floor.”

The answer is:

“(f) The water undermined the dirt fill, and after the water had been shut off and some time had elapsed, the surface of the floor collapsed and dropped approximately four to six feet, apparently due to the weight of cargo and traffic over it.” [49]

“(g) State the degree, if any, to which said pipe was corroded at the time of failure.”

“The hole through which water escaped from the pipe covered an area about as big as an average man’s hand.

“(h) State the material of which said pipe was made, the method of manufacture, the thickness of

its wall at the time of manufacture, the place of manufacture, and the date of installation.”

“Said pipe was standard cast iron bell and spigot, eight-inch water pipe, thickness of wall approximately 9/16”, place of manufacture unknown, installed about the year 1914.”

“(i) State the depth of the top of the said pipe below the top of the floor of said berth.”

“(i) The pipe was installed approximately seven to eight feet below the surface of the floor of said berth.”

The next interrogatory, your Honor, is No. VIII.

Mr. Yoakum: Are you omitting No. VI?

Mr. Verleger: That’s right, VI and VII.

“Interrogatory No. VIII.

“(a) Describe fully any method, plan, or system of maintenance, inspection, and repair which the City had in effect as respects said pipe, prior to the escape of said water from said pipe. Give names of all persons inspecting.” [50]

“(a) No inspection of the underground piping was made until some trouble was reported or some evidence of leakage developed, in view of the fact that this particular pipe was installed some eight feet below the surface of a concrete slab floor in use and it was impractical to break through the same.”

“(VIII-b) If any reports were made incident to said inspection, give the dates of said reports, and the persons to whom said reports were made.”

“(b) There was no underground inspection made of the piping in this transit shed, and no re-

ports were made except where evidence of leakage occurred."

The next is interrogatory IX.

"(a) State the uses to which the water in said pipe are put."

"(a) Fire prevention only. This pipe provided water to the sprinkler system in the transit shed only."

"(b) State the static head of water in said pipe in feet or in pounds per square inch when there was no flow of water in said pipe."

"(b) The static head of water in said pipe was the normal Los Angeles Water Department pressure in said area, which was approximately 65 pounds per square inch."

"(c) State the maximum internal pressure to which said pipe might at any time have been subjected, including [51] pressure of water hammer."

"(c) The maximum internal pressure to which said pipe would be subjected at any time would be the normal Los Angeles Water Department pressure; the shutoff valves in the system were slow moving, hand operated valves, and the air entrained in the system would have prevented any water hammer effect from occurring."

"(d) State whether or not the water from said pipe was being drawn at any point within the 24 hours prior to failure of said pipe."

"(d) No water was drawn at any point from said system within 24 hours prior to the occurrence of March 12, 1956, as far as is known."

"(e) State whether or not the flow of water in

said pipe was shut off at any time in the 24 hours of said failure, giving the time and occasion of said shutoff."

"(e) The flow of water in said pipe was not shut off at any time within 24 hours prior to the occurrence of March 12, 1956, as far as is known, with the exception of the shutoff which occurred at or about 6:45 a.m., March 12, 1956, after the leakage complained of."

"(f) State the maximum rate of flow of water in said pipe at any time in gallons or cubic feet per minute."

"(f) Under a pressure of 65 pounds per square inch, the rate of flow is approximately 20,000 gallons per [52] minute."

The next is Interrogatory No. X.

"(a) State what, if any, methods were used to ascertain at any time whether or not there was leakage from said pipe."

"(a) None, previous to the break. An inspection would only be made where surface water was apparent."

Interrogatory No. XI.

"(a) State what disposition was made of the section of pipe referred to following removal of such damaged section, if any, from said shed."

"(a) The pipe referred to was removed to the Harbor Department Supply Yard, Berth 161, where photographs were taken, and the pipe is now retained for further reference at the same location. Prints of the photographs are available upon request."

“(b) State whether said damaged section of pipe was marked in any way.”

“(b) The section of the damaged pipe was marked with crayon at the time it was cut out, for reference only.”

“(c) State where said damaged section of pipe is being kept at the present time.”

“(c) At the Los Angeles Harbor Department Supply Yard, Berth 161, Wilmington.”

“(d) State in whose charge said damaged section [53] of pipe was placed and in whose custody it now is.”

“(d) The damaged section of pipe is in the custody of C. V. H. Brashier, plumber foreman.”

The next is XIV.

Mr. Yoakum: How about XII?

Mr. Verleger: I am not offering that.

Mr. Yoakum: How about XIII?

Mr. Verleger: I am leaving out XIII.

Mr. Yoakum: I think it ought to be read.

The Court: How about XIII?

Mr. Verleger: Your Honor, we are offering only those portions which we think contain admissions. I don't think we are particularly inclined to cover XIII for that purpose.

The Court: I suppose you don't have to offer XIII, if you don't want to.

Mr. Yoakum: The rule says any part that is germane and explains anything else should be read just like on a deposition.

The Court: We treat the interrogatories as a whole, and if you read one, you have got to read

them all. Now, that is one thing. But if we look at each interrogatory by itself, then it may be that the plaintiff doesn't have to read the interrogatory. Suppose he asks for some interrogatories and the interrogatories are available, but [54] there are some only that he wants to read. Then does he have to read everything else and put them in as his testimony?

Mr. Yoakum: We don't contend that, your Honor. We do think that under the rules if you use part of a deposition you can be required to introduce all that is relevant to that part. The same rule applies in using interrogatories.

Mr. Verleger: Your Honor, I don't have any strenuous objection to reading XIII.

The Court: Then read XIII, if you don't have any objection.

Mr. Verleger: Interrogatory No. XII.

"(a) State whether or not the City has at any time made any alterations of the soil in which said pipe was placed, as respects the corrosivity of said soil and for what purpose."

"(a) There have been no alterations of the soil in which the pipe was placed, as far as is known."

"(b) If such an alteration was made, state by whom it was made and the date, and what was its effect."

"(b) No alteration was made."

Interrogatory No. XIII.

"(a) State whether or not the pipe in question was made of cast iron." [55]

"(a) The pipe was made of ordinary cast iron."

“(b) If the answer to (a) is ‘Yes,’ state whether or not the City has experienced failure of cast iron pipes by reason of corrosion in any past occasions.”

“(b) The Harbor Department has experienced, infrequently, some failure of cast iron pipes, as well as steel pipes, and wherever such failure has been experienced, replacement has been made as the condition was discovered.”

Interrogatory XIV.

“(a) State the number of occasions on which the City has experienced failure of cast iron pipes due to corrosion:

“1. Within 5 years or less after installation of such pipes,

“2. Within 5 to 10 years after installation of such pipes, and

“3. Within 10 to 20 years after installation of such pipes.”

“(b) Give the date and place of each instance of a failure of cast iron pipe in the City of Los Angeles within the past 10 years, giving in each instance the cause of said failure, and the date and place thereof, the date of the installation of the pipe, the soil corrosivity or resistivity, the type of soil, the diameter class and method of manufacture of the pipe.” [56]

The answers to Interrogatory No. XIV are:

“(a) The number of occasions on which the City of Los Angeles Harbor Department has experienced failure of cast iron water pipes due to corrosion, prior to March 12, 1956, and within the times hereinafter mentioned, are as follows:

“1. Within five years or less after installation of such pipes—none, so far as is known.

“2. Within five to ten years after installation of such pipes—none, so far as is known.

“3. Within ten to twenty years after——

Mr. Yoakum: Just a minute. Your Honor please, I object to reading the answer to No. 3 on the ground that is not the true answer to the question. It was corrected in a supplemental answer to the interrogatory.

The Court: Overruled. You can read the supplemental answer, if you wish.

Mr. Yoakum: It doesn't represent the answer any more than if a reporter had written down something and the witness had corrected it. It wouldn't be the witness' answer.

The Court: Overruled.

Mr. Verleger: “3. Within ten to twenty years after installation of such pipes—two specific instances, one approximately fourteen years and the other approximately [57] fifteen years after installation, so far as is known.

“There is a great deal of cast iron water pipe installed in the ground serving Harbor Department properties which has been in service continuously since 1914 or thereabouts, without any apparent failure.

“(b) The only instances of failure——”

Mr. Yoakum: Again, we would have to make the same objection to (b), your Honor.

The Court: Same ruling.

Mr. Verleger: “The only instances of failure of

cast iron water pipe installed by the Harbor Department and serving its properties within the past ten years prior to the occurrence of March 12, 1956, so far as is known, are as follows:

"On February 15, 1954, a section of five-inch cast iron bell and spigot water pipe was replaced, due to corrosion, at Berth 60. On October 11, 1955, a section of eight-inch cast iron bell and spigot water pipe was repaired, due to corrosion, at Berth 59.

"There is no record of the method of manufacture of these pipes, nor was any test made to determine the corrosivity or resistivity, or the type of soil, so far as is known."

Interrogatory No. XV.

"(a) State whether the City made any effort to ascertain the reasonable life to be anticipated of the pipe [58] beneath Berth 69."

"No effort to ascertain the reasonable life of the pipe installed beneath Berth 59 was made, nor is any effort made to ascertain the reasonable life of any other cast iron pipe installed in the ground on Harbor Department lands, because it is impractical to dig up such pipe for inspection."

"(b) If the answer to (a) is 'Yes,' state by whom said effort was made, what the estimated life calculated was, whether any written records exist of said estimate, and when said estimate was made, and what the estimate was."

"No estimate is made of the life of such pipe, and no written records exist on the subject as far as is known."

Interrogatory No. XVII.

Mr. Yoakum: How about XVI? It should be read.

Mr. Verleger: As I recall, the answers to Interrogatory XVI are included in these answers and objections to them were sustained. Further answers were required. In any event, your Honor, I don't propose to offer the answers to XVI. I will offer the answers made following the sustaining of our objections.

Mr. Yoakum: We think it is germane and relevant to matters that have already been developed.

The Court: Suppose you read the interrogatories and the answers.

Mr. Verleger: All right. [59]

Interrogatory No. XVI.

“(a) Does the City have any maps of the City of Los Angeles or any parts thereof indicating the corrosivity of soils with respect to the various areas in the City?”

The answer is:

“No maps of the Harbor Department properties of the City of Los Angeles indicate the corrosivity of the soil, so far as is known.”

In connection with that one, I think perhaps we should read at the same time the answer given to the interrogatory after the objections were sustained and corrected answers filed.

Mr. Yoakum: I submit in the interest of orderly procedure, your Honor, we should complete this, because the next one will raise some entirely different objections.

The Court: Let's complete this interrogatory.

Mr. Verleger: Your Honor, the one I am referring to is the answer that was given to this interrogatory after the objection to the answers first given were sustained.

The Court: Let's complete this document then.

Mr. Verleger: All right.

“(c) Does the City have records of underground cast iron pipe failures which show size and class of pipe, location, dates of installation and of failure, type of soil and soil resistivity or corrosivity, or any of the above? [60]

The answer is:

“No records of underground cast iron pipe failure, showing the size and class of pipe, location, dates of failure, type of soil, and soil resistivity or corrosivity are kept by the Harbor Department.”

Interrogatory No. XVII.

“(a) State whether or not the City has in its employ engineers who are experts with respect to corrosion of piping.”

The answer is:

“The Harbor Department has a testing engineer, C. M. Wakeman, who tests materials for strength and other qualities, which are used in Harbor Department construction projects.”

“(b) If the City has such experts in its employ, state whether or not their services were used in any way in determining the reasonable life of the piping in question.”

The answer is:

“No records are available indicating that the

services of a testing engineer were used in any way in determining the reasonable life of the cast iron pipe in question laid underground at Berth 59 at or about the year 1914.”

The Court: I wonder if I can have a stipulation from the parties? I suppose all the area, not under the shed, but under the street, under this particular pier, was [61] filled land. This is a man-made harbor and I assume earth was brought in and filled under this complete area. Can you stipulate to that?

Mr. Perkins: We will so stipulate, your Honor, for the City.

Mr. Brennan: I don't believe the Outer Harbor, for its part, really knows how much of the island is man-made. Whether or not this particular area is man-made, I don't know. There has been evidence taken that there was a considerable amount of fill put into this, but whether it includes the entire area or not, I don't know.

The Court: Of course, I don't know from looking at the maps how much of the channel was cleared out and where the sand and debris was put. I don't know how the fill was made here. You have got a finger, evidently you have got a finger going out into the harbor, and on the finger are these installations. Now, I would be very much surprised if soil wasn't brought in to fill up in this particular area.

Mr. Verleger: I would assume that the probabilities are that that the soil pulled out in dredging out the channel was used in filling up the area.

The Court: But the question has been raised

here that these pipes were put in soil that had a high corrosive element in it. Unless you can show that this fill came from a place that had a high corrosive element—why, this [62] fill may have come from 50 miles away.

Mr. Verleger: Your Honor, our position is based on actual data with respect to the soil here itself. In other words, we have taken samples of the soil here and checked it.

The Court: Have you taken samples of the soil immediately around this break?

Mr. Verleger: We have taken samples of soil beneath the warehouse in question, that is correct.

The Court: Immediately adjacent to the break?

Mr. Verleger: We analyzed one sample which came from inside the pipe itself, which had to be soil, I would say, that must have fallen into it at the time of the break.

The Court: I don't know. We have got an area here corroded out about as big as your hand. Water came out, and the water would certainly keep the soil from falling in until it was turned off.

Mr. Verleger: Until it was shut off, but afterwards there would be people shoveling around there.

The Court: And you have got a sample of that soil, have you?

Mr. Verleger: Yes.

The Court: All right. Go ahead.

Mr. Verleger: Your Honor, I would like next to call Mr. Brashier. [63]

Mr. Yoakum: Just, a minute, your Honor please, Counsel has not completed the answers to the in-

interrogatories. As I said to your Honor, that answer was explained in the additional answers.

The Court: He wanted to read something in the interrogatory and you objected. You wanted this all read at one time. This is the only interrogatory he has presented. If you wanted to present another interrogatory at the proper time, you may do so. I don't know what it is.

Mr. Yoakum: We think, your Honor, when a witness makes an answer and then corrects it, certainly if he says one thing in a deposition, counsel can't just drop him there when he has corrected it some pages later.

The Court: Where are the other interrogatories?

Mr. Yoakum: That was filed July 15, 1957, additional answers to interrogatories.

The Court: Additional answers to interrogatories.

Mr. Yoakum: Yes. There is an answer with this same affiant. I submit in fairness, so that it will be in its proper context, it should be read.

The Court: What interrogatory do you want read?

Mr. Yoakum: What is on page 2 and goes over to page 3. It is headed, "Answers to First Requirement."

The Court: Don't you think this interrogatory and answer should be read? [64]

Mr. Verleger: I think the original document is an answer and as such is admissible. I think the subsequent one is self-serving and for that reason——

The Court: Well, you go ahead and read it, anyway. Let's get it into the record.

Mr. Verleger: Can you give me the page again?

Mr. Yoakum: Start at the top of page 2.

The Court: That was filed July 15th.

Mr. Verleger: That's right, and the others, as I recall, were filed in January.

Mr. Yoakum: February 15th.

The Court: Start at the top of the page.

Mr. Verleger: "First: Respecting plaintiff's interrogatory No. 8, the defendant The City of Los Angeles is required to give the dates of any reports made where evidence of a leakage occurred as to piping in the transit shed referred to in the defendant's answer to plaintiff's said Interrogatory No. 8, and to give the name of the person to whom said report was made."

The answer:

"The dates of any reports made where evidence of a leakage in the transit shed referred to in defendant's Answer to Plaintiff's Interrogatory No. VIII, and the name of the person to whom said report was made, are as follows: No leakage due to corrosion or otherwise was ever reported prior [65] to the escape of said water from said pipe, in said pipe or in other piping inside the transit shed referred to at Berth 59. The date and the names of the persons making and receiving the report on the leakage which occurred March 12, 1956, are given in the Answer to Interrogatory No. VI.

"Upon further investigation and study of Harbor Department records, affiant finds himself to have

been in error with respect to incidents of prior leakage given in his Answer to Interrogatory No. XIV(b) heretofore made as follows: 'On February 15, 1954, a section of five-inch cast iron bell and spigot water pipe was replaced, due to corrosion, at Berth 60. On October 11, 1955, a section of eight-inch cast iron bell and spigot water pipe was repaired, due to corrosion, at Berth 59.'

"Affiant now corrects said answer quoted above to read as follows: On February 15, 1954, a section of five-inch cast iron bell and spigot water pipe inside the transit shed at Berth 60, which shed is separated by a concrete fire wall and driveway from the transit shed at Berth 59, was repaired due to a straight sheer from an unknown cause. This break was not due to corrosion. The transit shed at Berth 60 was empty at the time and no cargo damage occurred. No record of a report of leakage has been found in Harbor Department files. The broken pipe was repaired with a split sleeve at a time when a bulkhead within the said transit shed [66] was undergoing repair. On October 11, 1955, at 4:15 p.m., Harbor Department plumber Dale Pence was notified by telephone by Margaret Reynolds, secretary in the operating division, of a water leak at Berth 59 in the street outside the transit shed opposite Door 25. On October 13, 1955, the leak, due to a broken leaded joint, was repaired. This leak was not caused by corrosion. No water damage occurred in the transit shed at Berth 59 at said time."

Your Honor, in view of my prior objection, I

would move to strike that on the ground it is self-serving.

The Court: Denied.

Mr. Verleger: Mr. Brashier, will you please take the stand?

I am calling Mr. Brashier also, if the court please, as an adverse witness pursuant to Rule 43(b). He is an employee of the City, your Honor.

Mr. Yoakum: To which we object on the ground he is not in the class of employee who can be called under 43(b), nor is he an employee of the City.

The Court: I will have to reserve my ruling until I get some testimony as to what he is doing, what his occupation is.

Mr. Brennan: We object to calling this man as an adverse witness, too, as far as the Outer Harbor is concerned. [67]

The Court: All right.

Mr. Wood: I would like to join in the objection on the ground as far as Grace Line he is not an adverse witness.

The Court: Swear the witness.

CHARLES VINCENT HARVEY BRASHIER, called as a witness herein, having been first duly sworn, was examined and testified as follows:

The Clerk: Will you state your name, please?

The Witness: Charles Vincent Harvey Brashier.

The Clerk: Will you spell that last name?

The Witness: B-r-a-s-h-i-e-r.

The Court: Will you go into his qualifications

(Testimony of Charles V. H. Brashier.)

now so if there is any objection I will know how to rule upon the objection?

Direct Examination

By Mr. Verleger:

Q. Mr. Brashier, on March 12, 1956, in whose employ were you?

A. Los Angeles Harbor Department.

Q. What position did you have with them?

A. Plumber foreman.

Q. How long before that had you worked for the City [68] of Los Angeles?

A. Approximately 37½ years.

Q. How long after that event did you work for them?

A. Until March 1, 1958.

Q. On March 1, 1958, what happened? Did you retire?

A. Yes, sir.

Q. Do you draw a pension from the City?

A. Yes, sir.

Q. You stated a little while ago that you were a former foreman at the time in question. Were you in charge of the plumbing work on the piping of the Harbor Department?

A. Yes, sir.

Q. Did you have other plumbers under your direction?

A. Yes, sir.

Mr. Verleger: I think, your Honor, that completes my foundation with respect to this witness.

The Court: What was the objection relative to not being a party who could be called under the rule?

Mr. Yoakum: There is no reflection on the witness, but I don't think he has the dignity of one who may be called and, furthermore, he is not an employee.

The Court: He was an employee at the time, wasn't he, of the occurrence?

Mr. Yoakum: Yes.

The Court: Do you mean to say if he is an employee [69] at the time of an accident and subsequently is fired or discharged, he no longer can testify?

Mr. Yoakum: I think if it is shown that it was a sham or something to prevent——

The Court: Have you got any authority?

Mr. Yoakum: I don't have one with me, no, your Honor, but I think that is clearly the rule. You have to be an employee.

The Court: The rule says a party may call an adverse party or an officer, director, or managing agent of a public or private corporation or of a partnership or association which is an adverse party——

I don't find anything here that says he has to be an officer, director, or managing agent at the time of the trial. He may have been such at the time of the transaction and between the time of the transaction and the time of the trial, which sometimes may be two or three years later, he may have severed his connection. I don't know of any rule which says because of that he can't testify.

Mr. Yoakum: He doesn't have the status of any of those, never had the status of any of those per-

sons enumerated, officer, director, or managing agent of this corporation. He was a plumber and plumber foreman at the time of the incident.

The Court: Have you got any authority as to this? [70]

Mr. Verleger: No, your Honor. I think the managing agent is a person who supervises. This man had other plumbers under his direction and control. That would seem to me to be sufficient for the purpose.

The Court: We have a case involving—well, let's be more specific. Let's take our Santa Fe case down here when the train ran off the tracks. Could you call the engineer as an adverse witness?

Mr. Verleger: I would say, your Honor, he would very clearly be adverse.

The Court: I know, but he is not an officer and he is not a managing agent. Of course, he is the man that really knows.

Mr. Verleger: The man who really knows. Your Honor, I think that, unlike this gentleman, a person like that would not have others under his direction, and that makes a substantial difference.

The Court: Managing agent usually means a manager of some kind. Well, now, let's take Lockheed, for instance. We will take a foreman, a supervisor of a gang. Can you call him as the managing agent because he manages a gang?

Mr. Verleger: It would seem to me for the purpose of the rule, one ought to be able to do so, your Honor.

The Court: It seems to me that you ought to, too, [71] but what have the courts said about it?

Mr. Verleger: Your Honor, all I can offer to do in that regard is take a look between now and 2:00 o'clock and turn up something that would perhaps be of help to the court.

The Court: It occurs to me this man may have information that is valuable to the court and information the court ought to have, but there has been an objection here. I don't think very much of the objection based on the fact that he is no longer working for the City. I could dispose of that very rapidly. But whether or not he comes within the definition, I don't know.

Well, it's nearly 12:00 o'clock. Let's see what we can find out about this during the noon hour. I will look and see what I can find about it, but don't rely upon me. I will rely upon you.

Court will now stand in recess until 2:00 o'clock this afternoon.

(A recess was taken to 2:00 o'clock p.m.) [72]

October 7, 1958, 2:00 o'Clock P.M.)

The Court: Have you been able to find anything?

Mr. Verleger: There is a case in 164 Fed. (2d) 996 in the Third Circuit Court where the testimony came from the train crew in an action for the death of a brakeman. I can quote a very brief paragraph that might be of help.

The Court: All right.

Mr. Verleger: The court says in its opinion that the facts came from the trainman who was permitted to be examined as a hostile witness. A footnote says: "We seldom quarrel with that exercise of discretion. Such permission gives the plaintiff greater latitude in the examination of his witnesses and the plaintiff is not bound by their testimony." The second case is *United States vs. Wardee*, United States Circuit Court of Appeals, Ninth Circuit, 175 Fed. (2d) 110. That was an action against the United States arising out of an automobile collision. The court permitted the examination of a petty officer of the Navy as an adverse witness. The driver in question had been a defendant in another action arising out of the same accident. The court makes the following remark:

"The third contention asserts error in permitting Wardee to call and examine McCoy as an adverse witness under [73] the rule."

It goes on to say:

"A reading of the testimony convinces us that the court did not abuse its discretion in indulging the presumption that McCoy, a former defendant in this action, would be an unwilling witness."

That as the Court well knows, involves two factors. However, Rule 43 applies to both hostile and unwilling witnesses, as well as to managing, and so on.

The third case is *Union Pacific vs. Ward*, Tenth Circuit, 280 Fed. (2d) 287. That is a case where error was assigned in permitting examination of an

engineer as a hostile witness. That was the hypothesis which the court put to counsel before recess. The observation was that the witness did not appear to be hostile, but he was the operator of the train involved in the accident. It was his negligence, if any, which spelled liability to the road. He was a veteran employee in a supervisory position. The railroad arranged for him to come to the trial, and it seems only fair to say that he was an unwilling witness to the plaintiff.

Those three cases are what we have found, your Honor. There is one other case which I can cite to your Honor, saying that the mere fact that a man has left the employ of the company does not change the situation. [74]

The Court: Have you got any authorities?

Mr. Yoakum: Yes, I think so. In *Dowell vs. Jowers*, 182 Fed. (2d) 576, Fifth Circuit, the court held specifically that an engineer, not an engineer, but an engineer in charge of what is called an acidizing crew that went in to work on a gas well was not an officer, director, or managing agent. It is an express holding.

I thought perhaps I was in error or naive about it. I thought we left this morning on the idea that this man was being called either as an officer, director, or managing agent, and that there was no claim of hostility. There has been no showing that he is a hostile witness.

There is one other case in California under 2055, under the statute as it read previous to a recent amendment which liberalized the rule, is *Abney*

against San Francisco, 115 California Appellate (2d) 506 at 513. A bus driver from the City of San Francisco, who was involved in an accident, could not be called as a managing agent of the City of San Francisco.

These cases that counsel for plaintiff has cited, the first one, the point wasn't really discussed, we just passed over it and assumed it in a footnote, and the other two are not applicable to the matter under discussion this morning, they both being related to the hostile witness aspect of the matter. [75]

The Court: I would like to ask counsel a question. This term managing agent is not only mentioned in Rule 43, but is mentioned in at least two other rules. One is 26 and one is 4. Rule 4 has to do with the question of service of summons on a managing agent. Would you feel that you could serve this witness a process on the theory that he is a managing agent?

Mr. Verleger: No, your Honor.

The Court: Then you think there is a distinction between the term managing agent as used in Rule 4 and as used in Rule 43?

Mr. Verleger: I would think so, your Honor. I am thinking, further than that, my feeling was the question was simply whether I could examine this witness under Rule 43(b) as an adverse witness, and if the first sentence about whether the witness is hostile or unwilling is relevant, the cases that I have cited indicate that a person with the type of affiliation the witness with the defendant herein is such a witness, your Honor.

The Court: I will read to you from a decision rendered by Judge Albert. He is a district judge in Sacramento. This is found in 20 Federal Rules Decisions 583, or in 25 Federal Rules Service 775. Judge Albert says:

“Examination of available law discloses a singular lack of articulating definite standards with regard to the [76] meaning of the term managing agent as the same is used in Rule 43(b). The Fifth Circuit”—and this is one of the cases cited—“The Fifth Circuit summarily found the defendant’s engineer in charge of an acidizing crew was not an officer, director, or managing agent, and failed to mention what standards of tests were applied to reach this conclusion.

“The Third Circuit in *Moran vs. Pittsburgh & Des Moines Steel Company*, 182 Fed. (2d) 467 found that the signing of a partnership stationery by the manager, although in fact such person was not a manager of the partnership, nor officially connected with the partnership in any capacity, was sufficient to constitute the witness a managing agent of the partnership for the purpose of Rule 43(b). Again no definite standards are set forth.

“The District Court for the Western District of Wisconsin in 1939, in the case of *Peterson Construction Company vs. Lafayette County, Wisconsin*, 2 Federal Rules Service 43.2, case 1, District Court for the Western District of Wisconsin, held a construction superintendent employed by a corporate party was not an officer, director, or managing agent of the corporation, because he had only

limited authority. How his authority was limited is not made apparent by the version of the case in Federal Rules Service.

“No other case construing this facet of Rule 43(b) [77] has been cited to me, and in my research on the point I found no other case bearing directly on the problem.”

Now, this is 1957.

Now, Judge Albert seemed to think he had come to a conclusion as to what is meant by managing agent by referring to Rule 26(d). I think I can come to some conclusion by referring to Rule 4(b). I don't think that service of process upon this witness as managing agent would be any good at all. I can't see how he can come within the rule as managing agent. He may come under the rule as a hostile witness, but do you have a right to call any witness as a hostile witness?

Mr. Verleger: Your Honor, I would suppose that a witness who had been for a great many years the employee of the defendant who had been in charge largely, as I understand, of maintenance of the very type of instrumentality which failed, and who is currently receiving a pension from the defendant, would within the purview of a rule of that sort be treated as a hostile witness. I don't think the term can be confined to people who make a display of hostility on the witness stand, because the most effective hostile witness can be a witness who doesn't show any hostility at all.

The Court: Then any employee of a defendant corporation can be called as a hostile witness so

long as his [78] loyalty is with the defendant corporation?

Mr. Verleger: To me, your Honor, that is the only way of reconciling the cases that deal with the railroad engineer, for example.

Mr. Yoakum: Then, of course, you don't need that other part of the rule in there at all. It is just surplusage, because anybody that has had an honorable career with any company is presumed hostile to the other side.

The Court: I can't find any cases that go that far, although Judge Albert does comment upon the fact that the witness before him was an employee, had been an employee for a long time, and it was natural to assume that his loyalty would be with the defendant, rather than with the plaintiff, and he allowed the examination.

I think I will sustain the objection.

Mr. Verleger: Your Honor, in that event, we will request in any event that the witness take the stand for our own limited purposes. We hope to do what we can without benefit of the rule, your Honor.

The Court: All right.

Mr. Verleger: Reserving, of course, any rights we have by reason of the court's ruling.

The Court: All right. Come forward. [79]

CHARLES VINCENT HARVEY BRASHIER, recalled as a witness by the plaintiff herein, having been heretofore duly sworn, was examined and testified as follows:

Direct Examination
(Continued)

By Mr. Verleger:

Q. Now, Mr. Brashier, I think you testified this morning that you had been in the employ of the City since 1919, approximately, is that correct?

A. Yes, sir.

Q. Will you again tell me briefly what jobs you held with the City during that period of time?

A. The first two to three years, approximately there, I worked on a piledriver, driving piling.

Q. Mr. Brashier, you will pardon me if I interrupt you. Maybe it will speed things up if I go back a little.

Prior to 1946, how long had you been a plumbing foreman for the City?

A. I was not really classified as a plumber foreman, but rather as a lead man from about——

Q. Whatever the position may have been, how long did you have it before, sir?

A. Before when?

Q. Before 1956, when this break took place.

A. I would like to ask if your question is correct. I [80] was foreman from March, 1949, was former foreman.

Q. From March, 1949, through 1956, you were a plumbing foreman, is that right?

(Testimony of Charles V. H. Brashier.)

A. Yes, sir.

Q. You had a number of plumbers working under you, is that correct? A. Yes, sir.

Q. Was it your job to maintain the plumbing, the piping, of the City of Los Angeles in the Harbor Area? By that I mean the plumbing under the jurisdiction of the Harbor Department.

A. Yes, sir.

Q. Where repairs were called for to that system, I take it it was you or the men under your direction during that time who made them, is that right? A. Yes, sir.

The Court: May I ask a question?

Mr. Verleger: Surely, your Honor.

The Court: Did you work for the City of Los Angeles?

The Witness: Yes, sir.

By Mr. Verleger:

Q. Prior, then, to 1949, for a number of years previously, were you a plumber for the City?

A. I was rated, I believe, on their books as a pipefitter [81] and plumber. I did both of those classes of work.

Q. At any rate, roughly, from 1935 to 1949, you were a plumber and pipefitter for the City, is that right? A. Yes, sir.

Q. Let me ask you this. In connection with your job, have you become familiar with the piping in the area of Berth 60, Berth 59, Berth 58, and Berth 57 of the City of Los Angeles? A. Yes, sir.

(Testimony of Charles V. H. Brashier.)

Q. So that you can tell us what pipes there are and where they go, is that right?

A. Yes, sir.

Q. Now, referring to Plaintiff's Exhibit 1 for identification, am I correct in stating that the area between Berth 60 and Berth 68 and Berth 59 and 69 to 70, and likewise running on down here, is known as Signal Street? A. Yes, sir.

Q. Is it correct to state that in the center of Signal Street there there is a 10-inch water main that is operated by the Water Department of the City of Los Angeles?

A. That water main is not in the center of the street.

Q. Then would you tell us where it is?

A. It is approximately 10 feet east of the west curb line.

Q. 10 feet east of the west curb line. I see. Then [82] approximately at any rate 10 feet east of the west curb line, in that area, there is a 10-foot main that belongs to the City of Los Angeles and which is operated by the Water Department, is that right? A. Yes.

Q. Does this entire area have a name or any convenient word we can use in referring to the whole of it?

Mr. Perkins: I will stipulate the area is called Pier A.

Mr. Verleger: I will be pleased to so stipulate.

Mr. Perkins: Or Pier 1.

Mr. Verleger: Pier 1. All right.

(Testimony of Charles V. H. Brashier.)

Q. Then referring to this entire area as Pier 1, does this 10-inch main go from the intersection of East 22nd Street and Signal Street close to the end of Pier 1? A. Yes, sir.

Q. Now, does the Harbor Department or does the City of Los Angeles, let me put it that way, acting through the Harbor Department, have a main of any kind which parallels this 10-inch main in any way? A. Yes.

Q. Can you describe this parallel main for us?

A. It is an 8-inch cast iron main running parallel to the 10-inch main, beginning—this next statement is approximately a guess—approximately 200 feet south of the south [83] curb line of 22nd, and extending to approximately 200 feet north of the south end of Berth 60.

Q. In other words, there is a line, an 8-inch line of the Harbor Department, which starts about 200 feet away, 200 feet this side of East 22nd Street and parallels the 10-inch main to a point short of the outboard end of Berth 60, is that right?

A. Yes, sir.

Q. Is this 8-inch main of the Harbor Department connected in any way with the 10-inch main of the Water Department? A. Yes, sir.

Q. At how many places is it so connected?

A. Three.

Q. Now, could you step down here and indicate on this drawing approximately where the three connections are? A. Yes, sir.

Q. Would you do so, please?

(Testimony of Charles V. H. Brashier.)

(Witness leaving stand and going to black-board.)

Q. Do you want to mark there where they are?

The Court: And let's mark these B-1, -2, -3.

The Witness: Approximately 200 feet south of 22nd Street is the first one.

Mr. Verleger: Do you want to put the word B-1 there? [84]

Mr. Yoakum: Will you extend it up into here so that it can be readily seen, and draw a line?

(Witness complying.)

Mr. Verleger: Then where would the second be? Go ahead.

(Witness indicating.)

Mr. Verleger: Would you like to mark that B-2, sir?

(Witness complying.)

Mr. Verleger: Would you mark where the third is, sir?

(Witness complying.)

Mr. Verleger: Referring to this 8-inch main of the Harbor Department—will you take the stand again for a minute?

(Witness resuming stand.)

By Mr. Verleger:

Q. Referring now to this 8-inch main of the Harbor Department, does that have any source of

(Testimony of Charles V. H. Brashier.)

water other than the three connections onto this 10-inch main? I'm sorry. If I am not clear, I apologize.

As I understand it, you have testified it is connected at three points to the 10-inch water main of the Harbor Department. Is it connected at any other place with any other source of water?

A. I would consider a tank a source of water—could [85] I?

Q. I think you could. A. Yes.

Q. Where is it connected? Is it connected to a tank? A. Yes.

Q. Is it connected to more than one tank?

A. No.

Q. Is it connected to any source other than, first, the tank, and, second, the 10-inch water main of the city? A. No.

Q. Where is this tank?

A. On the roof of the No. 1 warehouse.

Q. Would you like to indicate where the tank is?

(Witness leaving stand and going to exhibit and marking it.)

Mr. Verleger: Would you mark that as B-4, please?

(Witness complying.)

The Court: Where does that tank get its water?

The Witness: From the 8-inch fire main.

The Court: From the what?

The Witness: From the 8-inch main.

(Testimony of Charles V. H. Brashier.)

The Court: 8-inch main?

The Witness: From the 8-inch main, yes.

By Mr. Verleger:

Q. In other words, the water comes from the city 10- [86] inch water main into the 8-inch main, and from the 8-inch main up to this tank, is that right? A. Yes.

Q. Is the tank connected at all times and is the connection into the system open at all times?

A. Yes, sir.

Q. Is there anything that keeps water in it other than the pressure of the system? A. No.

Q. So that if at any time then, so I am clear, there is a leak of any kind of sufficient size, put it that way, so as to relieve the pressure, water would tend to run out of that tank as well as from the city source, is that right?

A. If the pressure in the tank was greater than the city water pressure.

Q. Yes, or if the city water pressure was sufficiently relieved by the break. A. Yes.

Q. To where does the water in this 8-inch main go?

The Court: What do you mean?

Mr. Verleger: I am sorry, your Honor.

Q. Are there other pipes that go off this 8-inch main into various buildings? A. Yes.

Q. Into what buildings do they go? [87]

The Court: Can't you stipulate? It seems to me all these facts have been agreed to by the parties.

(Testimony of Charles V. H. Brashier.)

I don't know why it is necessary to produce a witness to establish facts you all agree to.

Mr. Verleger: If we are all in agreement that the sole purpose for which this system is used is to supply water to the sprinkler systems in these buildings, and to also supply water at the valves of the various fire hoses within the buildings, why, I don't know of any need for any further questions. Is there any dispute about those?

The Court: Can you stipulate?

Mr. Yoakum: So I can be sure I understand it and don't embrace something I don't understand, we will be willing to stipulate that the water from the 8-inch main maintained by the Harbor Department is used solely for fire prevention purposes in these various berths, and that it feeds into the berths in the places indicated by the lateral coming off of the mains, there being two laterals into each berth.

Mr. Verleger: Just again, so we express the fire prevention purposes precisely, my understanding is what it does is provide water first for the sprinkler systems within those buildings and, second, at the various fire hoses which are attached to the walls in the buildings. Is that what we understand?

Mr. Yoakum: You understand that the sprinkler [88] systems are for fire prevention purposes.

Mr. Verleger: What I want to do is stipulate to the facts, rather than the adjective which may be used to describe them.

Mr. Yoakum: I think I state my position that

(Testimony of Charles V. H. Brashier.)

this water from the 8-inch main goes into these various places solely to be used for either fire prevention sprinklers or fire prevention hoses.

Mr. Verleger: May I ask, is there any dispute, is there any suggestion that they go anywhere except to the sprinkler systems or to these hoses?

Mr. Yoakum: And to the tank.

Mr. Verleger: And to the tank.

Mr. Yoakum: Which is a fire tank.

Mr. Verleger: Yes. That is stipulated to.

Mr. Yoakum: Unless I am corrected. I think that is right. Yes, that is correct.

Mr. Verleger: I take it there is a further matter which I would inquire into as to whether there is any dispute. On each of the three connections from this 8-inch main to the 10-inch main of the water department, there is a water meter. May we stipulate to that, also?

Mr. Yoakum: I am afraid that is an over simplification of the matter. That might mislead the court. There is a meter, but it is not the conventional type that you might [89] expect, and I think it needs some explaining. Mr. Perkins thinks we ought not to try to stipulate to that feature.

Mr. Verleger: All right, as counsel prefers.

Q. While I am here, Mr. Brashier, may I ask this. Are there any meters placed on the three lines which lead from the Water Department 10-inch line to the Harbor Department 8-inch line?

A. Yes.

Q. Will you describe those meters?

(Testimony of Charles V. H. Brashier.)

A. They are generally a three-quarter or a one-inch meter attached to the side of a Hershey check valve.

The Court: What are the purposes of the meters?

The Witness: To detect the flow of water, a small stream of water, in the event someone would start using it for domestic purposes, using it for something other than fire.

The Court: Would the meters indicate any leakage of water?

The Witness: Yes, as long as it wasn't over an inch size.

The Court: Over a what?

The Witness: Over an inch size of water.

By Mr. Verleger:

Q. Those meters had devices on them, I take it, for recording the amount of water which flowed through, is that right? That is, they had the ordinary dial you have on a [90] water meter which shows the number of cubic feet, how much water flowed through?

A. That was going through the one-inch meter, on the side of that valve, yes.

Q. You referred to the existence of a Hershey gate valve in there.

A. A Hershey check valve.

Q. A Hershey check valve. Will you describe briefly what the Hershey check valve is?

A. Hershey check valve is a swinging object

(Testimony of Charles V. H. Brashier.)

that is pushed open by the pressure of water. When the water stops flowing, it closes off.

Q. So long as the flow of water—the one-inch meter is set up as a by-pass for the valve, is it not?

A. Yes.

Q. So long as the flow of water is such that it can pass through the meter, the check valve remains closed, is that right?

A. Yes.

Q. When the system is opened up, if it is hypothetically opened up so as to sprinkle generally the warehouse in the manner generally in fire, the main valve opens up, is that right?

A. If enough sprinklers went off, yes.

Q. And similarly, if there were enough hoses turned on, [91] the main valve would open, is that right?

A. Yes.

Q. Did you, Mr. Brashier, read those meters at any time?

A. No, sir.

The Court: You mean personally?

By Mr. Verleger:

Q. Personally, first.

A. No, sir.

Q. Did anyone under your direction read those meters?

A. No, sir.

Q. At any time were you ever called upon to make repairs by reason of readings found in those meters?

A. No, sir.

The Court: Were you the superintendent there relative to these lines?

The Witness: No, sir.

The Court: Was it your duty to read the meters?

(Testimony of Charles V. H. Brashier.)

The Witness: No, sir.

Q. (By Mr. Verleger): So far as you know, did anybody in the Harbor Department read those meters?

A. Not that I know of.

The Court: What were they there for?

The Witness: For the Water Department to detect if [92] anyone was stealing water off of them.

The Court: If nobody read those meters, how could they detect it?

The Witness: He asked me the question, your Honor, if the Harbor Department read them. The meters do not belong to the Harbor Department.

The Court: To whom do they belong?

The Witness: To the Water Department.

Q. (By Mr. Verleger): Was there any physical obstacle preventing you or anybody working for the Water Department from picking up the man-hole cover and reading those meters?

A. No.

Q. Now, then, Mr. Brashier, on March 12, 1956, were you called out there to Pier 1 by reason of a leak?

A. Yes, sir.

Q. Can you tell us as well as you can remember what happened that morning from the very moment you heard of the leak?

A. Well, I just got up in the morning and was in the bathroom at the time when the phone rang. I was informed that there was a water leak at the Outer Harbor in the area of Berth 59.

Q. Who called you, do you know?

A. A Harbor Department watchman. [93]

(Testimony of Charles V. H. Brashier.)

Q. What did you do thereafter?

A. Proceeded to get dressed, get in my car, and go to the Outer Harbor, Berth 59.

Q. Do you remember about what time it was you were called?

A. Somewhere about 6:00.

Q. Do you remember about what time it was when you got there?

A. About a quarter to 7:00, something like that. I didn't look at a watch, sir.

Q. What did you do when you got there?

A. Stopped my car and got out my boots and put them on, took out my key wrench and closed the water off.

Q. You refer to a key. What was the key you took out? A. A key wrench.

Q. Is this a special type of wrench for the equipment involved? A. Yes, sir.

Q. After you got the water turned off, did you do anything to locate the leak?

A. Immediately, sir?

Q. No. At any time. A. Yes.

Q. How soon after you turned off the water did you start to locate the leak? [94]

A. It was possibly two hours.

Q. What did you do in order to find the leak?

A. I sounded the pavement.

Q. You sounded the pavement in Berth 59?

A. I sounded the pavement over the pipe.

Q. Was the pavement you refer to in Berth 59 or out in Signal Street?

(Testimony of Charles V. H. Brashier.)

A. It was on the loading platform outside the warehouse.

Q. Referring now to Exhibit 1 again, there is a loading platform, that being an area that is raised three or four feet high above the street level, on the street side of Berth 59, is that right?

A. Yes, sir.

Q. And the floor of that loading platform is concrete, and that floor goes right on into the building, is that right?

A. In some places it goes on.

Q. Yes, where it goes through the doors.

A. Yes, sir.

Q. You spoke of sounding the pavement on the loading platform.

A. Yes, sir.

Q. And you located the leak, I take it, by finding a spot where the paving sounded hollow, is that right?

A. I knew where the pipe was, sir. [95]

Q. You knew which pipe it was that was probably leaking?

A. Yes.

Q. Then having found the spot you, I take it, caused the pavement to be broken off and got in and found the particular pipe that was leaking, is that right?

A. Yes, sir.

Q. Referring now to Plaintiff's Exhibit 20, is this a picture of part of the process of repairing the leak?

A. Yes, sir.

Q. Referring now to Plaintiff's Exhibit 17, is this also a picture of part of that process?

A. I believe that to be the same place.

(Testimony of Charles V. H. Brashier.)

Q. When you made your repair, did you cut out the section of damaged pipe and remove it?

A. Yes, sir.

Q. You did this with the aid of a burning torch or some such instrument? A. Yes, sir.

Q. I will ask you whether or not those are photographs of the pipe which failed as removed from the spot there?

Mr. Yoakum: They have been embellished, haven't they?

Mr. Verleger: There seems to be some extra things on them. There is a tape mark. [96]

Mr. Yoakum: There is tape and there is a stick.

Mr. Verleger: That's right, but is that, nevertheless, a piece of pipe?

Mr. Yoakum: As long as they don't represent the pipe as it was torn out.

The Witness: I couldn't swear that was the pipe they took out. That looks like most any pipe. This one looks like the pipe that I removed.

The Court: May I ask a question? You say, "I removed." Did you do the actual work?

The Witness: I was standing there watching it being removed.

The Court: Let me ask you another question. This defective pipe was cut out and new pipe was put in, I suppose?

The Witness: Yes, sir.

The Court: Did you make an inspection of the pipe adjacent to the leak?

(Testimony of Charles V. H. Brashier.)

The Witness: I made an inspection of the pipe adjacent to this.

The Court: I'm sorry?

The Witness: I cut that off.

The Court: This case may be appealed and when it goes up on appeal, they won't know what "this" means. You cut out a section of pipe. Did you make an inspection to see what condition the pipe was in beyond the break, or before you [97] got to the break?

The Witness: I inspected the pipe where I cut it off. I did not pursue the pipe farther than where it was good to make the necessary repairs.

The Court: So you don't know what the condition of the line was other than just near the place the break took place?

The Witness: That's right.

The Court: There was a defective piece of pipe there, you cut it out and put in a new piece?

The Witness: Yes, sir.

Q. (By Mr. Verleger): How large a piece of pipe did you cut out?

A. Oh, approximately six, seven feet.

Q. Was there a hole through the pipe?

A. Yes, sir.

Q. How large was the hole?

A. About the size of my hand.

Q. Did you find a piece that had fallen out of that hole, or anything of that sort, in the vicinity?

A. No, sir.

Q. Did you see whether the metal of the pipe

(Testimony of Charles V. H. Brashier.)

was hard in the vicinity around the pipe or around the hole, or was soft? A. I did not. [98]

Q. Did you make any check to see if the pipe itself—there is a term sometimes used by plumbers in describing a pipe as soft, isn't there?

A. Yes.

Q. Did you make any check to see if any part of this section of pipe you took out was soft?

A. Yes.

Q. What did you do?

A. Used my hammer on it.

Q. Did you scratch away any of it to see if any of it was soft?

A. That is the way you find if it is soft.

Q. Did you find this part you removed was soft?

A. Yes.

The Court: Let me ask you a question. You found this pipe was soft. How do you know how large a section to cut out?

The Witness: Your Honor, when the metal has left the pipe, it becomes like a soft carbon. Taking your hammer, you can hit it and it will sound entirely different. As you hit the dead spot, you can dig it. If it is good pipe, you do not.

The Court: Well, I take it from the testimony that this pipe failed in only a very small area and the rest of the pipe other than that small area was good? [99]

The Witness: As far as I know. It was buried under railroad tracks. It was good where I caused it to be cut off.

(Testimony of Charles V. H. Brashier.)

Q. (By Mr. Verleger): I believe you referred to one of these pictures as appearing to be the pipe the way you removed it. Could you indicate which one of these so appeared to you?

A. This hole and everything looks like the pipe.

Q. You are referring to Plaintiff's Exhibit 19 for identification?

A. Yes, this one.

Mr. Verleger: Your Honor, at this time I would wish to offer Plaintiff's Exhibits 19, 17 and 20 in evidence.

The Court: They may be received.

The Clerk: Plaintiff's Exhibits 17, 19 and 20 in evidence.

(The exhibits, marked Plaintiff's Exhibits 17, 19 and 20, were received in evidence.)

The Court: May I ask this witness a question?

This pipe that we have been talking about, it comes in sections when it is laid, doesn't it?

The Witness: Yes, sir.

The Court: How long are the sections ordinarily?

The Witness: They are from 10 to 18 feet. It would be according to the time that they were manufactured. [100]

The Court: The piece that you cut out, did you cut out an entire section or did you cut out a part of a section?

The Witness: They were two short pieces of pipe that had been used in that particular area.

(Testimony of Charles V. H. Brashier.)

The Court: Do I understand you cut out a part of two sections?

The Witness: A part of two sections, yes, sir.

The Court: A part of two sections. All right.

Q. (By Mr. Verleger): When you got down into the hole there, you found, I take it, the dirt had been washed away from around the pipe to an extent, is that right?

A. Yes, sir. Pardon me, sir.

Q. Do you wish to correct your answer? Go ahead. A. What was the question?

Q. My question was, when you opened up the paving, you got down into the hole, and you found that some dirt had been washed away, is that right?

A. Yes, sir.

Q. After you got the sections of pipe out, where did you take them?

A. To the Harbor Department supply yard at Berth 161, Wilmington.

Q. Were they kept there thereafter?

A. So far as to my knowledge, yes. [101]

Q. So far as you know, was their condition changed thereafter?

A. Ask the question again, please?

Q. So far as you know, was their condition changed after being taken to that yard?

Mr. Yoakum: I object on the ground that it is uncertain. I don't know what the question means. I don't think the witness knows.

The Court: How would he know unless he made an examination?

(Testimony of Charles V. H. Brashier.)

Mr. Yoakum: I don't know what he means by it.

The Witness: I don't know that there was ever any change in the pipe after it was taken to the yard, sir.

Q. (By Mr. Verleger): Did you see the pipe in the yard at a time subsequent to the time it was taken to the yard?

A. I don't recall any special instance that I actually looked at it.

Q. Do you know whether you have seen it at all after it was taken to the yard? A. No.

Mr. Verleger: I don't think I have any further questions of this witness.

Mr. Yoakum: If the Court please, I would have considerable questions of this witness, but perhaps they might [102] not be considered in the nature of cross-examination, so I suppose the proper procedure would be to just examine him with reference to matters that Mr. Verleger examined him on and defer the rest.

The Court: I would suggest while we have the witness on the stand you get all the information you want from him and then he can be excused. There is no use keeping him here.

Mr. Verleger: Your Honor, I have one rather short witness I would like to get on and off the stand sometime this afternoon. That would be the only thing I have in mind.

The Court: It shouldn't take very long, should it?

Mr. Yoakum: If we do all of the anticipated

(Testimony of Charles V. H. Brashier.)

examination, it will take some time to follow your Honor's suggestion about concluding with the witness. So I would think we might defer to the convenience to this brief witness. I will be some time unless you just want me to examine him as to matters developed on direct.

The Court: I was just thinking about the convenience of the witness, but if the witness is working for the City of Los Angeles, the Harbor Department or somebody else, maybe he could come back and testify.

Mr. Yoakum: Of course, he isn't working for the city or the Harbor Department, but I think he will come back to testify. [103]

The Court: That's right. If he is retired, I guess he doesn't have to be anywhere, I suppose. Maybe you better restrict your examination to cross-examining the witness on what was covered in direct and wait until the proper time to put on your case.

Mr. Yoakum: All right.

Cross-Examination

By Mr. Yoakum:

Q. Mr. Brashier, during the time you worked for the city, did you always work for the Harbor Department of the city? A. Yes, sir.

Q. Referring to this Exhibit 1 for identification, which is this drawing, I wish that you would locate on there the place where the turnoff valve was by means of which you shut off the water on the

(Testimony of Charles V. H. Brashier.)

morning of March 12th. Come down here, please, and mark it and then indicate it by a B-5. Do you have the question in mind? Where was the turnoff valve which you turned with your key that morning?

(Witness leaving stand and indicating on exhibit.)

Q. Before you go back to your seat, I call your attention to the testimony this morning of Sebastian Miretti. He indicated as point M-1 the point where you turned off the valve. I am pointing to it. That is not correct, is it? [104]

A. There is no valve there on the fire main.

Q. This was a fire main valve that you turned off that morning?

A. Yes, sir.

Q. Showing you Exhibit No. 20, the workman down in the hole there, does that picture show the part of the pipe that you removed?

A. I removed—that is part of it. That shows part of it.

Q. If I interpret the picture correctly, there seems to be a lateral off close to the pavement, more or less running horizontally, and then it is going down by means of a T, descending vertically. Where with reference to that T was this piece that you removed?

A. I removed this pipe below the T back to just inside this wall, this representing the wall here, see, down in there. I cut that off there. This is an L. This piece drops down here, and this is an L, turns

(Testimony of Charles V. H. Brashier.)

at right angles, and runs back out through this loading platform into the street.

Q. From the L at the bottom of the fitting here running toward the ladder, there was the section of pipe that you removed, is that correct?

A. Yes, sir.

Q. This next picture, Exhibit 17, does that show the [105] piece of pipe that was removed?

A. Yes.

Q. There is a workman here with a welding torch.

A. Melting out the lead out of the joints.

Q. Is this joint here where he is working headed towards the shed?

A. I am of the opinion that is going out under the street, the way it is laid. It is hard to tell from the picture, because it is only a hole in the ground. It is hard to say which way it would be looking, but I think that is so. Otherwise, they would show an L pipe going under it as shown in this picture.

Q. I direct your attention to the bell portion of the pipe which appears almost directly below that workman's head. Was that piece removed?

A. Yes.

Q. Did you remove some of the pipe that extends to the right as you look at this picture?

A. Yes.

The Court: And some of the pipe that extends to the left?

The Witness: Yes.

Q. (By Mr. Yoakum): So you removed from

(Testimony of Charles V. H. Brashier.)

the point on the left where the workman is cutting out a distance how far over from the bell [106] to the right?

A. I would say somewhere from seven to eight feet over to this L as shown in this other picture.

Q. Are you able to tell either by looking at that picture or from memory where the hole was in this pipe?

The Court: You mean whether it was up on the side or the top or the bottom?

Mr. Yoakum: Well, first, your Honor, let's see if he can tell us where along the axis of the pipe the hole was. Was it near where this man was doing the burning or was it over toward the right side of the picture?

The Court: What is your answer?

The Witness: It is almost impossible to tell, but I believe it to be near this bell on this piece of pipe as far as my memory is concerned.

Q. (By Mr. Yoakum): To the right of the bell, as far as you know? A. Yes.

Q. Was the hole on the down side of the pipe or on the upside? A. The down.

The Court: That picture there of the pipe——

Mr. Yoakum: Your Honor, this one here, you mean 19?

The Court: 19. That only shows a part of the pipe [107] that was removed, doesn't it? It doesn't show the entire pipe that was removed? I am asking you.

(Testimony of Charles V. H. Brashier.)

The Witness: You are asking me? That is correct. This piece of pipe represents this piece of pipe. This pipe was——

Q. (By Mr. Yoakum): Let's get this clear. Wait a minute, now. The piece of pipe that appears in Exhibit 19 is the same as the longer length of pipe running to the right of the bell in Exhibit 17, is that right? A. That's right.

Mr. Yoakum: Did you have any more questions, your Honor?

The Court: No.

Q. (By Mr. Yoakum): Do you know whether you painted any symbol or identification on that pipe when it was taken out?

A. I did not paint any symbol on it.

Q. Did you see any symbol or number or other means of identification? A. No, sir.

Mr. Yoakum: I have nothing further.

The Court: Any other question? [108]

Cross-Examination

By Mr. Brennan:

Q. On the morning of March 12th when you went down, did you shut off any other valve other than the lead-in valve that you have marked on the blackboard? A. No, sir.

Q. Did you go into any of the pits that are located along Beacon Street? A. No, sir.

Q. Other than just the one that you shut off.

A. That was a street valve. That was not a pit.

(Testimony of Charles V. H. Brashier.)

Q. Were any of the pits that morning?

A. I saw some firemen opening pits.

Q. Were some of these firemen going into the various pits?

A. They claimed they were going to shut the water off.

Q. You saw firemen going in and out of the various pits along Beacon Street, did you?

Mr. Yoakum: Pardon me, counsel. It is not Beacon Street. It is Signal.

Mr. Brennan: Signal Street is what I should have said. I am sorry.

The Witness: Yes, sir.

Q. (By Mr. Brennan): Are there any outlets from this 8-inch line other [109] than sprinkler heads and the valves of the fire hoses?

A. No, sir.

Mr. Brennan: That's all I have.

The Court: Any other questions?

Mr. Wood: I have no questions.

The Court: Any redirect?

Mr. Verleger: I don't think so.

The Court: You may step down.

We will recess until 10 minutes after 3:00.

(Recess.)

The Clerk: All parties are present. Now ready for further testimony. Defendant City of Los Angeles has now had marked for identification their Exhibit No. G.

(Testimony of Charles V. H. Brashier.)

(Exhibit was marked Defendant's Exhibit G for identification.)

Further Cross-Examination

By Mr. Yoakum:

Q. I direct your attention to this piece of pipe down here that is marked G and has got a big 59 on it there, Mr. Brashier, and I ask you if that is a portion of the section that is indicated here in the Plaintiff's Exhibit 19?

A. I believe it to be the same section, yes.

Q. I direct your attention to the little hole in 19, through which a stick has been stuck, and I direct your attention to a little hole here about the size of what a small [110] finger could get through, and ask you if you can tell us anything about that little hole.

A. I made that with a claw hammer.

Q. Why did you do that?

A. Testing the pipe.

Q. This Exhibit G for identification, it would be the portion of the pipe farther away from the bell end as shown in this Exhibit 19, would it not?

A. Yes, sir.

Mr. Yoakum: We would like to offer that as the Defendant's Exhibit G.

The Court: It may be admitted.

The Clerk: Defendant's Exhibit G in evidence.

(The exhibits heretofore marked Defendant's Exhibit G was received in evidence.)

(Testimony of Charles V. H. Brashier.)

Mr. Yoakum: Your Honor please, the bell end hasn't come up here yet. Probably it will be here within the next few minutes. I don't know whether this witness should remain for that purpose of identification.

The Court: We will put this in as Exhibit G and when you get the bell end here, we will put it in as Exhibit G-1.

Mr. Yoakum: All right.

The Court: Any other questions?

Mr. Verleger: Just one short question. [111]

Redirect Examination

By Mr. Verleger:

Q. You testified, I think, that the whole soft pipe was taken to the yard of the Harbor Department and was kept there for a period. So far as you know, was any other similar piece of pipe taken over to the Harbor Department and kept there, or was this the only piece of pipe of that sort that was dug up there?

A. Well, now, there are two pieces of pipe.

Mr. Verleger: Let me rephrase the question then, your Honor. I am sorry.

Q. Was whole pipe from any source other than Berth 59 taken over to the Harbor Department yard, say, within the next six months after this affair?

A. I don't recall of any particular pipe. However, if any had been removed, no doubt it would have been taken there.

(Testimony of Charles V. H. Brashier.)

Q. You were the foreman of the plumbers at that time, is that right? A. Yes, sir.

Q. So far as you know, no other was removed, is that right?

A. Not to my knowledge or not to my recollection.

Mr. Verleger: Nothing further.

The Court: You may step down.

(Witness excused.) [112]

Mr. Verleger: Mr. Drake, will you take the stand, please?

JOHN F. DRAKE,
called as a witness on behalf of the plaintiff,
having been first duly sworn, was examined and
testified as follows:

The Clerk: What is your full name, sir?

The Witness: John F. Drake.

Direct Examination

By Mr. Verleger:

Q. Mr. Drake, what is your occupation?

A. I am a chemist and a metallurgist.

Q. As a chemist, specifically, have you had any experience testing materials for the presence of salt? A. Yes, I have.

Q. Have you had that experience over a number of years?

A. I have been a chemist since 1917.

Q. Have you made a number of tests for the

(Testimony of John F. Drake.)

presence of salt, say, in different materials within the last 10 years?

A. I have made numerous tests, several hundred, at least.

Q. Did you at a date after March 12, 1956, go down to the harbor area and obtain a sample of earth from any source? A. Yes, I did.

Q. Where did you obtain this sample of earth from? [113]

A. I obtained it from sections of pipe in the yard of the Harbor Department.

Q. Was this dirt that was within these sections of pipe?

A. It was dirt that had been trapped in the pipes.

Q. What did you do with this earth?

A. I took it to the laboratory of Kennard & Drake, the laboratory I own, and made tests on it.

Q. To what tests did you submit it?

A. to tests for the presence of chlorides and sulfates.

Q. Can you state briefly what those tests are?

A. The test for chlorides, the salt was leached out with distilled water, a few drops of nitric acid were added, and then the silver nitrate was added to the filtrates, and a heavy precipitate of chlorides, or a heavy precipitate of silver chloride was found.

Q. Does this result indicate whether or not there was salt in the earth?

(Testimony of John F. Drake.)

A. Yes. It indicated there was a considerable amount of salt in the earth.

Mr. Verleger: That's all.

The Court: May I inquire, when you say "salt" what do you mean?

The Witness: Sodium chloride, common salt.

The Court: Just common salt?

The Witness: Yes, sir. [114]

The Court: You wouldn't be surprised to find salt in the earth adjacent to the seashore, would you?

The Witness: No. You would find some.

Cross-Examination

By Mr. Yoakum:

Q. Where are you employed, Mr. Drake?

A. The laboratory that I own. Our laboratory is at 3364 East 14th Street, Los Angeles.

Q. Do you have any trade name, or just John F. Drake Laboratory?

A. The trade name is Kennard & Drake, K-e-n-n-a-r-d & Drake.

Q. How long have you been so engaged there?

A. Since 1944. At this address since 1951. Prior to that, since 1944, in the same partnership.

Q. When did you go down to the harbor?

A. I believe it was on the 22nd of March, 1956.

Q. Where did you go?

A. I first went to the office of Don Pugh, or of the Pugh Construction Company, met Mr. Don

(Testimony of John F. Drake.)

Pugh, who then took me to the Harbor Department yard and identified the pipe.

Q. Who is Don Pugh? Is that P-u-g-h?

A. P-u-g-h.

Q. Did you say he was of the Pugh Construction Company? [115] A. Yes.

Q. Did anybody else identify the pipe?

A. No, not to me.

Q. What pipe did Mr. Pugh point out to you?

A. He pointed out a section of cast iron pipe, 8-inch diameter.

Q. He told you that this was the pipe that had burst? A. That's right.

Q. Did you observe anything about the pipe that you can remember at this time?

A. Yes. The pipe was a section of pipe with a fairly large hole in the middle, somewhere near the middle. I can't recall exactly where.

Q. How long was it?

A. I would say somewhere around 10 feet or so. I don't remember exactly.

Q. Did you make any measurements?

A. No, I did not.

Q. What did it look like at each end? Describe the ends.

A. One end, I am sure, had a bell. I don't know about the other.

Q. Then what did you do?

A. There was soil that had been washed into the pipe, into the interior of it, and I took samples of this soil. [116]

(Testimony of John F. Drake.)

Q. How did you know that the soil had been washed in? A. By the appearance of it.

Q. Did anybody tell you it had been washed in?

A. No. The appearance of the soil was such that it would indicate that water action had taken place and had washed it in there.

Q. Was the soil wet when you saw it, or dry?

A. It was dry at that time.

Q. Was it powdery?

A. Yes. Well, it was caked, but if you took it in your hand, it would powder up. It was quite dry.

Q. Did you go over to Berth 59 and take any soil specimen?

A. At the time that I was there at this particular time, when I was there at Berth 59, the hole had been covered and I did not take any samples there.

Q. You didn't take any there at any time, did you, at 59?

A. I don't recall whether it was Berth 59 or another spot. Somewhere in that vicinity, I took some samples at another time, so I can't say it was Berth 59.

Q. Do you remember when that was?

A. It was subsequent to this failure.

Q. Did you analyze those? A. Yes. [117]

Q. Did they analyze out the same as this soil that you found in this pipe?

A. Yes. They were heavy in chlorides and sulfates.

Q. With reference to this specimen that you

(Testimony of John F. Drake.)

took from the pipe on March 22nd, did you make a written report? A. I believe I did.

Q. Do you have a copy of it?

Mr. Verleger: Here it is, counsel, if you would like to have it.

The Clerk: Do you wish to mark that?

Mr. Yoakum: May I just look at it a moment?

(Interruption.)

Mr. Yoakum: I think we ought to have this document marked.

The Court: It may be marked.

Mr. Verleger: I have no objection.

The Clerk: I will mark this Defendant's Exhibit H.

(The document referred to was marked Defendant's Exhibit H for identification.)

The Clerk: Also, at this time, your Honor, the other piece of pipe has come and has been marked as Defendant's Exhibit G-1.

(The exhibit referred to was marked Defendant's Exhibit G-1 for identification.)

The Court: I don't think that you told us, or if [118] you did, I didn't get it, where you found the pipe.

The Witness: In the yard of the Water Department, or the ground in the yard.

The Court: It was on the ground, was it?

The Witness: Yes, sir.

(Testimony of John F. Drake.)

The Court: It was not in a shed of any kind?

The Witness: No. I am not sure whether it was on blocks or not. It appears to me it was on the ground.

The Court: It was out in the open, was it?

The Witness: Yes.

The Court: How far from the dock, or how far from the place where the pipe was removed from the ground was it to the place that you found it, that is, in the yard, do you know?

The Witness: I don't recall that. San Pedro Harbor always bothers me a little bit. There are so many ways to get around it. I do know where Berth 59 is, but at the moment I can't tell you where the yards are.

The Court: It is some distance away, though?

The Witness: Yes, it is quite a distance.

Q. (By Mr. Yoakum): Mr. Drake, calling your attention to this report of yours, which is Exhibit H for identification, on page 2 you refer to two numbers here, your lab numbers, or something, 46548, and then underneath that, "Soil from inside of the pipe." [119]

Does that relate to a specimen of soil that you took from inside this pipe that you saw? Is that what that relates to?

A. I believe we broke off a couple of pieces of pipe at that time from the corroded and uncorroded section of the pipe, and the soil was attached to this pipe on the inside.

Q. You took some of the pipe with you?

(Testimony of John F. Drake.)

A. Yes.

Q. Does that number 46548 indicate a lab number of a soil test that you made?

A. Yes. That indicates the number that was given to the pipe, and this is the number that was given to the sample of soil from that pipe.

Q. The soil sample from pipe 46548 was given No. 46547, is that right?

A. I believe so.

Q. Quantitatively, how much soil was involved in this specimen in 46547?

A. You mean the amount we took away or the amount we tested?

Q. The amount you tested.

A. Generally—of course, this is a qualitative test. There was no point in making a quantitative test because of the fact that obviously had been washed into the pipe, so the amount we have used would be a small amount, say, a gram or [120] so, the amount you put on the end of a spatula—that is usually the amount we would use, anyway.

Q. Would you consider that gram of soil would be indicative of the soil in that area of the breakdown at Berth 59?

A. This was fine silt. Yes, I would, for this reason. Water action—of course, chlorides are soluble in water and, therefore, would—washing into that soil would consequently saturate all of it pretty much the same way. We took the soil, mixed it up, and took a gram for analysis.

Q. Would that water action of a large pipe

(Testimony of John F. Drake.)

bursting have any tendency to rid the soil of some things and concentrate it with others?

A. Well, generally, I would consider that the action of the water in this case would be to dilute the amount of salt that was present before the break.

Q. You never did test any of that soil down there and make a report on it, though, from 59?

Mr. Verleger: That is objected to as ambiguous. I am not clear what counsel means by "the soil down there."

The Court: I understand. I don't know whether the witness does or not. If counsel doesn't understand it, it's too bad.

Mr. Yoakum: I want the witness to understand it so we can get a fair answer.

Q. The question is, you never took a specimen from [121] 59 direct?

A. Not at this time, no, sir.

Q. You say you did it later?

A. I cannot recall whether it was from 59 or another area there, because it is a totally unrelated case.

Q. Now, then, with reference to your lab specimen, 46547, you say "chlorides present."

A. Yes.

Q. But you don't indicate any amount of chlorides. What is the reason for that?

A. Well, they were present in quantities that would be not excessively large in that particular

(Testimony of John F. Drake.)

sample, but much larger than you would get in ordinary city water.

Q. You had the same comment here with reference to the sulfates. You said it was present, but you indicate no quantity of it or percentage.

A. No, I do not there.

Q. I take it this next item here in parentheses is soil specimen 46549 taken from pipe No. 46550. Do I correctly interpret that?

A. Yes, that is the way it appears to me.

Q. You say there, without specifying any percentages, "considerable chlorides and sulfates present."

A. That's right.

Q. Now, then, below that you have the comment, "The [122] above tests merely show that chlorides were present in the soil around the pipe; since no quantitative determination would be of value, none was made." Will you please explain what you mean by that last comment?

Mr. Verleger: That is objected to as immaterial, your Honor.

The Court: Overruled.

The Witness: Well, principally the reason that the qualitative test was the only test that would be of value there because of this reason. There is a small amount of chlorides present in ordinary city water. However, that is much less than we found in the sample that we examined, or in both those samples. However, with a flooded area, you would have some leaching of the normal salt content of the soil and, therefore, that doesn't give you any real meas-

(Testimony of John F. Drake.)

ure of the amount of salt that was present in the soil before the flooding by the water that came out of the pipe. That was my reason for not making any further tests.

Q. (By Mr. Yoakum): Do you know, Mr. Drake, the source from which that water came that came out of that pipe that day?

A. No, I don't.

Q. Are you familiar with the content of the Metropolitan Water District water, Colorado River water? [123]

A. Yes. I have made—I don't know whether it is Colorado River or the mixed water. I have made tests on that on numerous occasions.

Q. The mixed water, is that the water for drinking purposes?

A. The ordinary drinking water, yes.

Q. Do you know how that rates with respect to chloride contents?

A. I don't know, because I don't know whether we get water from the Colorado River at times, or whether most of the water is from the Sierra watershed, or whether they are mixtures, and they would vary naturally.

Q. Just assuming that the water was Colorado River water, what would you say with reference to the chloride contents of it?

A. I have never made any test of Colorado River water as such, that I could say was Colorado River water alone.

Mr. Yoakum: Your Honor please, at this time

(Testimony of John F. Drake.)

we move to strike all the testimony of this witness with respect to this analysis of this soil on the ground that no proper foundation has been laid, in that it was just hearsay, pointing out to him the pipe and, furthermore, the soil specimen was taken from this pipe at least 10 days after the incident here, and the pipe had been removed and had been left outside. There is no basis at all for showing that that was the soil that was in [124] that pipe when it was taken from the outside of 59.

The Court: Denied. I think it is up to the Court to decide, or to pass upon the testimony. One of the things the Court will have to consider, I think, is the testimony of this witness as to the time and how he got the specimen.

Mr. Yoakum: I have finished with Mr. Drake.
your Honor.

The Court: Any other questions?

Mr. Brennan: No.

Mr. Wood: No.

Mr. Verleger: No questions.

The Court: May this witness be excused? If he needs to come back, he can come back.

Mr. Wood: You don't want this witness, do you?

Mr. Yoakum: No. I think this report ought to remain here.

The Court: It is marked for identification. It will remain with the clerk until this case is all over with.

Mr. Drake, you may be excused.

(Witness excused.)

Mr. Yoakum: Your Honor please, as G-2, we would like to have this section marked for identification.

The Court: It may be marked for identification G-2 only.

The Clerk: G-2 for identification. [125]

(The exhibit referred to was marked Defendant's Exhibit G-2 for identification.)

The Court: Call your next witness.

Mr. Yoakum: I want to know if we may have these two, G-1 and G-2, in evidence without bringing Mr. Brashier back again. It is obvious that they match up, but if you want him, he is here.

Mr. Verleger: No argument, your Honor.

The Court: All right. G-1 and G-2 may be received in evidence.

The Clerk: G-1 and G-2 received in evidence.

(The exhibits heretofore marked Defendant's Exhibits G-1 and G-2 were received in evidence.)

Mr. Verleger: Your Honor, I would like to read next the answers to certain supplemental interrogatories.

The Court: Will you tell me when they were filed?

Mr. Verleger: Your Honor, I have to find them. They weren't here. I thought they were. The answers were received by us September 26, 1958. I would assume they were filed on or about the 24th of September.

Mr. Yoakum: September 26th, your Honor, according to our stamp.

The Court: "Answers of City of Los Angeles to Plaintiff's Supplemental Interrogatories," is that right?

Mr. Verleger: Yes, your Honor. [126]

The Court: All right.

Mr. Verleger: Your Honor, Interrogatory No. 1:

"State whether or not there was any water meter or water meters connected to the water line or to the main supplying said water line, from which the water escaped in the present case, particularly including any detector meters, on the line or lines connecting the Water Department main in Signal Street with the Harbor Department sprinkler main in Signal Street."

Answer: "Yes."

"Interrogatory No. 2

"State whether or not any person read said meters, or any of them, at any time.

"Answer to Interrogatory No. 2

"On information and belief I am informed that By-Pass Meters (sometiems called detector meters) were read by an employee of the Department of Water & Power.

"Interrogatory No. 3

"Were any of said water meters read within the three months next preceding March 12, 1956?

"Answer to Interrogatory No. 3

"Yes.

"Interrogatory No. 4

"If the answer to Interrogatory No. 3 is

‘yes’, [127] state:

“(a) The name, description and location of each said meter”;

The answer to Interrogatory No. 4 is:

“(a) Service No. 2690—a 1-inch Hersey By-Pass Meter, No. 1350948, located near Berth 60 and about 5 feet east of the west line of Signal Street.

“Service No. 2692—a 1-inch Hersey By-Pass Meter, No. 13509444, located near Berth 58 and about 4 feet east of the west line of Signal Street.

“Service No. 8849—a 1-inch Hersey By-Pass Meter, No. 1350937, located near Berth 57 and about 4 feet east of the west line of Signal Street.

“(b) On information and belief I am informed each of these three meters was read by an employee of the Department of Water & Power on January 7, 1956, two of them were read on February 4, 1956, and the third (Service No. 8849) was read on February 9, 1956, and all three of them were read March 1, 1956.”

Interrogatory No. 4. “(c) The manner in which [128] the reading was recorded, if it was so recorded;”

The answer is:

“(c) On information and belief I am informed that the readings were recorded on the Automatic Sprinkler Service Records of the Department of Water & Power.”

Interrogatory No. 4. “(d) The person to whom the meter readings were given and the use made of them, if any.”

The answer is:

“(d) On information and belief I am informed the meter readings were given to someone in the billing department of the Department of Water & Power and thereafter bills were submitted to the accounting department of the Harbor Department.”

I am going to skip (e) unless somebody wants it.

Mr. Yoakum: Omit it as far as the city is concerned.

Mr. Verleger:

“Interrogatory No. 5

“State whether any records exist of the reading of said meters during any of the said period.”

The answer is “Yes.”

“Interrogatory No. 6

“State whether, upon the reading of said meters, any flow of water was indicated. [129]

“Answer to Interrogatory No. 6

“On information and belief I am informed that on some of the occasions in question a flow of water was indicated.

“Interrogatory No. 7

“If the answer to Interrogatory No. 6 is ‘Yes,’ state:

“(a) The date when said flow was indicated;

“(b) The rate and amount of said flow;”

The answer to (a) is:

“On information and belief I am informed that the flow was indicated during the period of a portion of the period approximately 30 days preceding the reading of the meters.

“(b) The amount of the flow was as follows (measured in 100 cu. ft.):

Date of Reading	Service No. 2690	Service No. 2692	Service No. 8849
1/7/56	25	8	1
2/4/56	38	6	
2/9/56			1
3/1/56	29	5	None”

The Court: May I inquire, did any of the witnesses identify the place where the water went into the building by a service number? [130]

Mr. Verleger: Your Honor, as I understand it, these meters are located between the 10-inch line and the 8-inch line, so that there is no service number that would appertain to a particular building. In other words, the meters measure the flow through the three lines into the entire 8-inch line, and then from the 8-inch line separate lines take off.

The Court: Then this is the flow from the 10-inch line into the 8-inch line.

Mr. Verleger: That's right. The 8-inch line in turn supplied the sprinkler system and the hydrant system for the entire area.

The Court: So this is the amount of water that was used in the entire area?

Mr. Verleger: That is correct, your Honor.

The Court: All right.

Mr. Verleger: That is the sole portion of these interrogatories we propose to offer.

Mr. Yoakum: Just a moment. You stop here at one that explains this flow, which leaves it hanging in the air. You ought to read it.

The Court: I think at least you ought to continue with the entire interrogatory and not leave off in the middle of the interrogatory.

Mr. Verleger: Your Honor, it breaks into various parts. The difficulty is, I am willing to accept the City's [131] figures, but I have no particular confidence in their explanation and, therefore, I am not willing to offer it on our behalf. I am perfectly willing to read it for Mr. Yoakum, if he wishes.

Mr. Yoakum: That isn't the criterion, whether he has confidence in the answer or not. It is whether it is relevant to something that precedes.

The Court: Well, I think you better read the explanation. I am going to get the explanation anyway. I will either get it this way or from a witness.

Mr. Verleger: As long as it is understood that we are not vouching for it, your Honor.

The Court: I understand you are not vouching for it.

Mr. Verleger: The question is:

"(c) The cause of said flow, if it was established;"

The answer to that is:

"(c) There are various causes for the flow. There was about 6000 feet of underground pipe on this one fire prevention system and in said pipe there were about 600 leaded joints or about 10 leaded joints per 100 feet. Some of the causes, but not necessarily all, are as follows:

"1. Minor leaks in the joints. [132]

"2. There were 36 2-inch drain valves which sometimes leak and are sometimes turned on when working on the system.

“3. There were 36 $\frac{3}{4}$ -inch inspector’s test valves which are used for testing whether the fire system is working and whenever these test valves are turned on a flow may be registered through the By Pass Meters.

“4. Improper seating of the alarm valves.

“5. If there is a surge in the pressure the alarm valves will open and the water will go into a closed drain. The water mentioned in explanations 2 and 3 also goes into the same closed drain and is not apparent.

“6. Longshoremen or other persons will sometimes ‘skylark’ by turning on the fire hoses that are present in the transit sheds merely for the fun or thrill of seeing water under pressure. There were 36 fire hose valves in the system on March 12, 1956.

“(d) What, if anything, was done to stop said flow;”

“(d) As leaks became known they would be repaired, [133] and when valves were found turned on they would be turned off, or if observed leaking they would be repaired.”

“(e) Whether such measure was successful in stopping said flow.”

“(e) Stopping the flow was successful when a leak was discovered and repaired or a turned-on faucet was found and closed.”

The Court: Do you want any other part of the interrogatories read?

Mr. Yoakum: I don’t think so, unless counsel does.

Mr. Verleger: Your Honor, counsel for the City has kindly furnished us photostats of the City's records, first, of the Water Department with respect to the measurements of these valves, and, second, through the Harbor Department building records. I have made photostats of the photostats and I would like to offer those at this time.

Mr. Yoakum: Please offer one at a time, because I have different objections to different documents.

The Court: Do the records show any difference between those and statements made by the witness? Is it just cumulative? The witness testified as to the amount of water.

Mr. Verleger: It is probably all cumulative with the single exception the Harbor Department records show they were billed for this flow and would therefore have known it [134] was going on. I wasn't sure that that was quite clear in the interrogatory. I would offer that alone, perhaps.

Mr. Yoakum: We have no objection to the billing that was received by the Harbor Department for these meters, if that is what you mean.

Mr. Verleger: I think the Harbor Department accounting records are clearer.

Mr. Yoakum: That's all right. Offer both of those, if you want.

Mr. Verleger: In addition, your Honor, I would also state this further for the record, that is, that these records do go back further than the answers to the interrogatories and show a flow for a longer

period of time. To that extent, they are not merely cumulative.

The Court: Do you have any objection to them going in the evidence?

Mr. Yoakum: If they will just specify what he is putting in first here. There is no objection to the Harbor Department accounting division records.

The Court: They may be received in evidence.

Mr. Yoakum: No objection to the bills going in.

Mr. Verleger: The next would be the records of the City Water Department, the readings of the sprinkler system meters.

Mr. Yoakum: We object to the readings of the City [135] Water Department on these meters on the ground they are immaterial. They are documents peculiarly belonging to the autonomous group known as the Department of Water & Power and they are their interdepartmental records. They are not brought to our attention other than as billings are submitted to us, and they are way too remote in time. They go back several years.

The Court: Overruled.

Mr. Yoakum: But the main objection is that they are the records of an independent autonomous department within the city, and hence not binding or material in any way insofar as the Harbor Department is concerned.

The Court: Overruled. They may be received in evidence.

Mr. Verleger: Your Honor, it is approximately three minutes to 4:00 o'clock. Should I start another witness?

The Court: No. We will start our recess when we have these marked.

Mr. Verleger: That's all we have.

The Clerk: Plaintiff's Exhibits 21 to 27, inclusive, are marked for identification and entered into evidence.

The Court: Before we recess for the afternoon, there is a problem I want to discuss with counsel. This is not the first time or this is not the first case where I have had similar problems. There is evidently an attempt being [136] made by the defendants to designate or keep separate and apart the City of Los Angeles and the Harbor Department.

On the other hand, there is an attempt on the part of the defendants to show that Grace & Company and Grace Lines, Incorporated, or Grace Lines Corporation, are one and the same party.

I have handled a number of anti-trust cases involving theatres. In all those anti-trust cases, we always have Fox, Fox West Coast, Fox Distributing Corporation, Fox Exhibiting Company, and Fox this and Fox that, and so forth, and so on, so it was very difficult to try to keep a distinction between these various corporations.

Finally, I just decided to call Fox Fox and let it go at that. The Circuit sustained me on that contention. I didn't try to distinguish.

Now, this is a case that is brought against the City of Los Angeles, the Outer Harbor Dock & Wharf Company, and also the Harbor Department. The testimony so far has been that these water lines

were owned by the city. They were serviced by city water. The maintenance was by the city.

So when we come to the other question of Grace Lines, Grace Incorporated, Grace & Company, I am going to have to decide whether I am going to try to meticulously keep a distinction between these various corporations, or whether I am just going to regard them as Grace. [137]

Then there is the question whether I am going to meticulously try to make a distinction between the different organizations within the city, or just going to collectively call them the City.

Now, I assume that there is plenty of authority to the effect that these various organizations should be kept separate and apart, and that notice to one is not notice to the other, and the action of one does not apply to the action of the other.

We have got here an action against the City of Los Angeles. We are dealing with a pipe line that was built by the City of Los Angeles, serviced by the City of Los Angeles, water was placed in there by the City of Los Angeles, and the water that escaped belonged to the City of Los Angeles.

I don't know whether it is going to be necessary for me to make a distinction or not. I would like to hear from the other attorneys, because they are just sitting back there and letting the City carry the burden. So far the City has done all the questioning. They are carrying the burden of this lawsuit. The others are just going along for the ride.

Mr. Yoakum: If your Honor please, so far as the City situation is concerned——

The Court: Will you talk so we can hear you, if you are going to talk at all? [138]

Mr. Yoakum: So far as the city is concerned, I think that it is exceedingly advisable, so that the record will be clear in this case, that you keep the different departments separate. I think your Honor has read the briefs, or a good portion of them.

The Court: I have read every word in your briefs.

Mr. Yoakum: Thank you. It is our position, as you know, that we were engaged in a governmental function in connection with this apparatus or property that gave way down there, and in order that we can be held liable, if it is a governmental function, certain requirements of law must be met. I don't think anybody gainsays that. They challenge our contention, although they admit it was for fire fighting, they deny it is a governmental function. We will get to that later on.

But I think for the purpose of keeping a good record here, it is very definitely advisable to keep separate the functions of the Water Department and the functions of the Harbor Department, because if we are correct on our position that this is a governmental function, why, the plaintiffs have an entirely different and additional burden to sustain before there can be any liability. So insofar as the two departments of the city are concerned, I respectfully suggest and request that you do maintain separate references to them.

The Court: I am going to treat the plaintiff and [139] the defendant exactly alike. If I keep

these corporations or business activities separate and apart, I am going to keep the Grace activity separate. We have got several Grace organizations here. This is brought in the name of Grace & Company, a corporation. That may not be the steamship line. I don't know. I don't know what the story is going to be. But if I keep a distinction as far as the activities of the City are concerned, I am going to keep that distinction as far as Grace Lines are concerned.

Mr. Yoakum: I have no comment about that.

The Court: I think somewhere in the briefs I read something about the alter ego of one and the other.

Mr. Yoakum: I think the evidence will probably show that Grace Line, Inc., which entity was the preferential assignee of this Berth 59, was acting as the agent of Grace & Co., the plaintiff here, in putting that cargo into that transit shed. If you wish to keep them separate for the purpose of the record, I have no quarrel with that. I am very interested in trying to have you do it with reference to the two departments.

The Court: I raised the question primarily because there was some argument in the briefs relative to the different Grace Companies here.

Mr. Verleger: Your Honor, may I be heard briefly on these questions? [140]

The Court: Yes.

Mr. Verleger: First, so far as the city is concerned, I think that the record will show negligence pre-eminently on the officers of the Harbor Depart-

ment. To that extent, I don't think the court will find the problem of distinguishing the two particularly acute, because so far as I can see, there seems to be no question but that their employees did not maintain, that is the essence of it, what they were charged with maintaining, the particular section of the pipe that failed.

Likewise, the evidence we have just admitted shows clearly there was leakage from the pipe prior to the event in question, and knowledge of this was brought home to the Harbor Department.

So, actually, the distinction, so far as the city goes, seems to be material only in this one content. If the activities of the City are proprietary, then under the authorities we have cited, it seems to be very clearly that running a dock is proprietary.

Likewise, under the case that we have cited, it seems to be very clear that the lateral of a water system which supplies water for a sprinkler system is proprietary. Then there is no need for us to prove specific notice.

I think this is what counsel had in mind when he says there is a great distinction between proprietary and non- [141] proprietary activities. There is no need for us to prove notice in perhaps quite the same sense as you have to against a governmental activity. In that context, all we have to show is that the City taken as a whole was negligent and that we are entitled to recover.

If this is a government activity, then one has to fall under the provisions of the government code which say that notice must be brought home to the

department charged with making the repairs. Actually, in the present case, I don't think that is going to cut a great deal of ice either. The reason I say that is simply this. We think the evidence of negligence that will be produced will be such as to show simply from the physical circumstances that existed there at the dock any competent engineer would know that failure was about due to happen, and under the authorities, we think that is quite clearly sufficient notice even if you are dealing with a governmental entity.

So that I don't think any context can arise in which the distinction between the Harbor Department and the Water Department is going to cut very much ice in this case. In other words, I just don't think this is that kind of a case.

Now, so far as Grace Line is concerned, I think the evidence will show that Grace & Co., Pacific Coast, is a corporation in the importing business. Grace Line, Inc., is a corporation in the steamship business. The dock here is used [142] by the steamship line through Outer Harbor Dock & Wharf under the terms of a preferential assignment for the discharge of cargo from the ship and the placement of it there until consignees pick it up.

For this, the city actually collects a fee, mostly from the preferential assignee, sometimes from the consignee.

The person who owns the goods placed on the dock, whether he be Grace & Co. (Pacific Coast) or John Doe, has no contract with the city for this purpose, any more than when I walk into Robin-

son's Department Store, I have a contract with the person who may have leased the store to the owner. But, nevertheless, when the City turns the dock over to these parties, they do so for the purpose of having it used in this connection and are liable to the people thus invited into the property for negligence in maintaining the property.

The only context, so far as I can see, in which a distinction between Grace Line and Grace & Co. (Pacific Coast) has any significance is this. The City has an ordinance which says, "We are not liable for leakage from sprinklers," for a couple of other specific things, "in any cause for which we are not made absolutely liable by law." I am not quoting it precisely, but doing as well as I can from memory. They seemingly do not maintain that we are bound by the thing simply as an ordinance, I suppose recognizing that the law in this state is clear that the City cannot make an ordinance [143] limiting its liability. They do maintain, seemingly, that it has validity as a matter of contract, and the way they get there is this. The berth assignment says that the berth assignee agrees to be bound by the charter of the City of L. A., by the regulations and the ordinances made by the city and the Harbor Department pursuant thereto. They say that is a contract incorporating an exculpatory clause, and that Grace Line, Inc., is bound by this contract under the terms of its berth assignment, and because W. & G. Grace & Co. is the same thing, it would be bound. To that it seems to me there are three answers. The first is that an exculpatory contract, a contract

incorporating ordinances palpably incorporates only valid ordinances. The second is that in any event it would be a contract with Grace Line, Inc., only in its capacity as a steamship operator. There would surely be no intention, even if Grace Line, Inc., had some goods of its own on the ship, that these would apply to it as a consignee when they don't apply to any other owner of cargoes.

So that again in this context I don't think the Court is apt to reach the problem of having to determine whether these entities are one and the same. Nevertheless, so that the Court will be clear on what the companies are, we will offer some evidence briefly on that subject before we conclude. [144]

The Court: I want the parties to know I am going to treat you exactly the same, and if you make an argument one way for the plaintiff, I am going to apply that argument on the defendant. I am not going to blow hot and cold. I am going to be consistent in my rulings.

Mr. Wood: May I be heard for one moment?

The Court: Yes.

Mr. Wood: I represent Grace Lines, Inc. I would like to point out what I think is a very definite distinction here. Grace Lines, Incorporated, the preferential assignee and the owner and operator of the steamship upon which this cargo came to the pier, was not an original party to this action. There is no issue as between plaintiff and defendant Grace Lines, Inc. We are in this action only because Outer Harbor, who is a defendant, claims

that we should indemnify them for any loss which they may sustain by reason of the contract existing between those two parties.

Now, the city alone has raised this issue of the duplication of interest here as a matter of defense as against the claim of the plaintiff. It seems to me it goes in the final analysis, I mean their point is that by reason of the preferential assignment of Grace Lines, Incorporated, some notice or a binding contract provision was rested upon the plaintiff here. That, it seems to me, is completely the City's burden to establish, and not for the plaintiff or for [145] Grace Lines, Inc., who is not interested except vicariously in the fundamental dispute here. It is not for us to disprove. Grace Lines, Incorporated, has no interest in that particular phase of it. We frankly have no interest in whether or not the plaintiff prevails.

The Court: I just wanted to bring this matter to your attention so you can be thinking about it, anyway.

Court will now stand in recess until 10:00 o'clock tomorrow morning.

(Whereupon, an adjournment was taken until 10:00 o'clock a.m., Wednesday, October 8, 1958.) [146]

Wednesday, October 8, 1958, 10:00 A.M.

The Court: You may proceed.

Mr. Brennan: If your Honor please, I believe there has been an agreement here that will eliminate

some of the issues, and certainly some of the parties to this lawsuit. I believe it has been agreed by all parties concerned that the plaintiff will dismiss its complaint as to Outer Harbor, also known as Uni-harbor, with prejudice.

Secondly, Outer Harbor will dismiss its third party complaint against the Grace Line with prejudice.

Thirdly, that Outer Harbor will dismiss its counterclaim against the plaintiff with prejudice.

Fourthly, that Outer Harbor will dismiss its cross-complaint against the City, but without prejudice to any other action now pending.

Fifthly, that the dismissals are to be without costs, that is, none of the parties are to receive costs, and that these dismissals are not to constitute or to be regarded as a release of a joint tort-feasor.

Mr. Verleger: So stipulated.

Mr. Yoakum: So stipulated.

Mr. Wood: So stipulated.

The Court: Such may be the stipulation.

Mr. Wood: I think the order should include, your [148] Honor, a dismissal of Grace Line, Incorporated's cross-complaint against the City of Los Angeles, which should be without prejudice, since it is a contingent claim over against the City. It should be without prejudice because there is other litigation pending arising out of this incident.

The Court: Is there any objection to dismissal?

Mr. Verleger: None on our part, your Honor.

Mr. Yoakum: No.

The Court: The dismissal may be granted.

The Clerk: Will the plaintiff prepare some type of order?

The Court: Will you prepare an order?

Mr. Brennan: I think we will have time to get that out. The others will be busy. We will prepare the orders and have them submitted.

The Court: Call your next witness.

Mr. Verleger: Will Mr. Wakeman take the stand, please?

CARROL M. WAKEMAN,

called as a witness on behalf of the plaintiff, having been first duly sworn, was examined and testified as follows:

The Clerk: Will you state your name, sir?

The Witness: Carrol M. Wakeman.

Direct Examination

By Mr. Verleger:

Q. By whom are you employed, Mr. Wakeman? [149]

A. City of Los Angeles, Harbor Department.

Q. Were you so employed on March 12, 1956?

A. Yes.

Q. For how long before that time had you been so employed?

A. Approximately thirty years.

Q. What is your position with the City of Los Angeles?

A. Testing engineer.

Q. How long had you held that position?

A. About the same time.

(Testimony of Carrol M. Wakeman.)

Q. Are you a licensed engineer?

A. I am.

Q. In that capacity was it your duty to test materials and determine the strength of materials for various uses by the City of Los Angeles?

A. Yes.

Q. As an engineer were you prior to March 12, 1956, familiar with the existence of corrosion in cast iron pipe?

A. Yes.

Q. Were you aware that such corrosion was most common in soils containing chlorides commonly found near the ocean?

A. Yes.

Q. After this episode of March 12th, were you asked to examine the piece of pipe which was involved in the failure [150] by Mr. Brashier?

A. No.

Q. Were you asked to examine it by someone else employed by the City?

A. Not that I recall.

Q. Did you examine the piece of pipe?

A. Yes.

Q. At any rate, you did examine the piece of pipe which was involved in this failure, is that right?

A. Yes.

Q. Did you determine that the failure in question was caused by graphic corrosion?

A. No.

Q. Did you conclude that it was due to graphic corrosion?

A. Yes.

The Court: Did you form any opinion as to what caused the failure?

(Testimony of Carrol M. Wakeman.)

The Witness: Yes.

The Court: What is your opinion?

The Witness: Well, I thought that it was graphitic corrosion that took place.

The Court: You thought it was corrosion?

The Witness: Yes.

The Court: The failure was caused by corrosion? [151]

The Witness: That is the way it looked. You see, the pipe was broken off when I saw it, and I didn't see it until several months after the break. The pipe was removed from the original location. I didn't see any part of the pipe at the time, at or near the time of failure, so I think it was the following, well, either a month or two months after that before I saw it, and then it was in little pieces, so it was very difficult to tell just what had occurred, because the pipe had been broken in removal and altered, and I wasn't sure of where the original break was in the first place. It was pointed out to me, but I wasn't sure of that.

Mr. Verleger: No further questions, your Honor.

Cross-Examination

By Mr. Yoakum:

Q. As a part of your duties as testing engineer, has it ever been your duty to test pipe, water pipe that was buried in the ground? A. No, sir.

Q. You say you are a testing engineer. What are your duties in that connection?

(Testimony of Carrol M. Wakeman.)

A. Primarily our department is charged with the testing of materials for acceptance for specified jobs, that is, to make sure that the materials are of the qualities that are specified, new materials. [152]

Q. You, of course, weren't with the Harbor Department at the time this pipe was installed?

A. No.

Q. In 1914? A. No.

Mr. Yoakum: Nothing further.

Mr. Verleger: Nothing further.

Mr. Yoakum: May this witness be excused?

The Court: May he be excused?

Mr. Verleger: Yes, as far as I am concerned.

The Court: You may be excused.

(Witness excused.)

Mr. Verleger: Next, your Honor, I wish to offer the answers to certain interrogatories which were filed—well, they were subscribed and sworn to on the 25th of June, 1957, and we received them on July 17th. My file copy doesn't show the filing date.

Mr. Yoakum: July 15, 1957.

Mr. Verleger: Your Honor, the answers that I am referring to commence in the lower part of page 3, and run through to the conclusion of the answers. They ask the City to enumerate the failures it has experienced with cast iron pipe within certain areas. There are a large number of such instances enumerated, and it would be my request that we offer the document itself, rather than attempt to read

this [153] list into the record, which would take a considerable period of time.

Mr. Yoakum: May I make a statement?

The Court: Yes.

Mr. Yoakum: We have no objection to the suggested course of procedure in the interest of economy of time, but we object collectively and severally to each and all of these answers on the ground that they are wholly immaterial here. These answers, if your Honor please, relate to the experience of the Department of Water & Power. They do not relate at all to the experiences of the Harbor Department.

It is our position that the experience of the Department of Water & Power with reference to its pipes has no materiality and is not germane to the question of whether the Harbor Department has been negligent in any way or whether there has been any notice to it.

Now, clearly, under the authorities, if this is a governmental function with which we are here dealing, the notice to the Department of Water & Power would be wholly immaterial under the public liability statute, because it is not notice to a person charged with remedying the condition. Furthermore, we submit that in the case of a large municipality, or any large political entity, notice to one branch is immaterial to prove notice to a completely separate autonomous branch. For that reason we object to any of these Ashline answers. Mr. Ashline is the corrosion [154] engineer of the Department of Water & Power.

The Court: Now, counsel, I might agree with you, but, however, I am not ready to rule at this particular time, so I am going to overrule the objection. I may agree with your theory in law, but at this time I am not ready to make such a ruling, so I am overruling your objection and will allow the answers to be admitted as an exhibit in this case.

Mr. Yoakum: May I add one additional ground there? We think with reference to many of these items they are too remote. In other words, they are not on this street at all.

The Court: I think that is for the Court to evaluate. Of course, I may be wrong, but it is my opinion where you are adjacent to the ocean you have a penetration of salt from the ocean. I don't know how far it goes back. I imagine it is more concentrated right on the shoreline than it is away from it a half-mile, but I would assume there is a concentration of salt from the ocean regardless of where the ocean is. So I think that is something for the Court to evaluate. I will overrule the objection.

Will you please come up here and be sure we get the right ones marked, because I think I had the wrong copy.

Mr. Verleger: Yes. It starts with page 3 here.

The Clerk: Plaintiff's Exhibit 28 in evidence. [155]

(The document referred to was marked Plaintiff's Exhibit 28, and received in evidence.)

Mr. Yoakum: Of course, some of that other has been already read in.

Mr. Verleger: Your Honor, there is attached to the interrogatories which we have just placed in evidence a corrosion map of the City of Los Angeles. I think in order to avoid the problem of taking apart the file at this time, we have a copy, and if counsel has no objection we will place that on the blackboard for use at this time.

Mr. Yoakum: The objection will be the same as that announced with respect to the interrogatories, but you have overruled me. That was part of the answers so we have no objection to using another copy for facility on the board. Is that going to be given a separate number?

Mr. Verleger: My thought is unless it is necessary to mark it, and I trust it will not be, we will just use the copy.

Mr. Yoakum: My thought would be that you will be referring to it with some witness, and I think it ought to have some kind of a designation.

The Court: Let's give it a number, 28-A.

The Clerk: 28-A in evidence.

(The document referred to was marked Plaintiff's Exhibit 28-A, and received in evidence.) [156]

The Court: And 28-A is exactly the same kind of map as is attached to Exhibit 28?

Mr. Yoakum: Yes, your Honor.

Mr. Verleger: Now, Mr. Ashline, will you please take the stand.

ROBERT R. ASHLINE,

called as a witness on behalf of the plaintiff, under Rule 43(b) of the Federal Rules of Civil Procedure, having been first duly sworn, was examined and testified as follows:

The Clerk: You may take the witness stand, please, and will you state your name, please?

The Witness: Robert R. Ashline.

The Clerk: Will you spell your last name?

The Witness: A-s-h-l-i-n-e.

Mr. Verleger: Preliminarily, your Honor, I should state with respect to Mr. Ashline that counsel and I have stipulated whereas Mr. Ashline has to get away at least tomorrow some time, therefore, in addition to cross-examing within the scope of the direct, it has been stipulated counsel can cover matters that would be properly within his direct.

Mr. Yoakum: So stipulated.

Direct Examination

By Mr. Verleger:

Q. Mr. Ashline, by whom are you employed? [157]

A. The Department of Water & Power of the City of Los Angeles.

Q. For how long have you been employed by the Department of Water & Power of the City of Los Angeles? A. Since June 25, 1924.

Q. What is your position with the Department of Water & Power?

A. I am corrosion engineer of the water sys-

(Testimony of Robert R. Ashline.)

tem. We have two corrosion engineers, one for power and one for water.

Q. Is that the position you held throughout this period time?

A. No. I have held this position since 1935.

Q. Do you have numerous employees under your supervision working for the City?

A. Yes, I do.

Q. Approximately how many? A. Six.

Q. You direct them in their work in this corrosion field? A. Yes, sir.

Mr. Verleger: Your Honor, I wish to call this witness under 43(b) as an adverse witness.

Mr. Yoakum: We would object on the same grounds we objected to the other day to calling Mr. Brashier. This man is clearly not—— [158]

The Court: Overruled.

Q. (By Mr. Verleger): Now, Mr. Ashline, I am going to refer to Exhibit 28-A in evidence. Did you prepare this map?

A. I had it prepared.

Q. You are familiar with the data contained on it, is that right? A. Yes, sir.

Q. Now, there is a legend Soil Corrosivity Indexes for Cast Iron Pipe, and then there is severe, moderate, mild, slight. A. That's right.

Q. Can you tell us first what you mean by a severe corrosivity index for cast iron pipe?

A. Yes. In testing soils we have instruments that measure the resistivity, the electrical resistivity of the soil. The magnitude of the readings that we

(Testimony of Robert R. Ashline.)

observe indicate the severity of the corrosion. It has been set up through testing experience to arrive at a point where we either decide on protecting the pipe or not protecting it.

Q. Then, so I am clear as to what you said, soil which has a certain electric resistance or lack of it is more corrosive so far as cast iron pipe goes than other soil, is that the situation?

A. The lower the resistivity or the higher the conductance [159] of the soil, the more severe it is corrosion-wise.

Q. Just so I understand, if more electricity will pass through the soil and there is less resistance to the passage, the soil is more corrosive as far as pipe is concerned, is that it? A. That's right.

Q. Do each of these represent some certain degree of electrical resistivity then which in turn is correlated with pipe? A. Yes.

Q. Starting first with severe, what is the corrosion there?

A. From zero to 1,000 ohms per c.c.

Q. So if soil has a resistance from zero to 1,000 ohms per c.c., it is considered severely corrosive, is that right? A. To cast iron.

Q. To cast iron. A. Yes.

Q. And similarly, if it is moderate, why, that in turn represents some degree of resistivity?

A. 1,001 to 2,500.

Q. And if it is mild, that represents what?

A. From 2,501 to 5,000.

(Testimony of Robert R. Ashline.)

Q. If it is slight, that in turn would be a different [160] figure? A. 5,000 to infinity.

Q. Are these figures based on some sort of research and experience as to what conditions actually tend to cause the corrosion in cast iron pipe?

A. Yes, sir.

Q. The City has conducted tests in that connection, has it?

A. The Los Angeles Water System has, and practically all the gas companies and oil companies have combined their research.

Q. These tests have been going on for a great many years?

A. Not a great many, but for the past twenty years.

Q. That would take them back to 1939?

A. I would say maybe a few years before that.

Q. In point of fact, you were actually carrying on tests well before that date, were you not?

A. I would say 1935 it really started.

Q. And tests of the same sort have been carried on by the United States Government and publications made about them? A. Yes.

Q. And likewise published in the engineering literature, and so on? [161]

A. That's right.

Q. Just so I am clear on the precise coloration, there is an area down here that is marked transit shed No. 59, and that bears a rather light color.

A. That is severe.

Q. That is marked severely corrosive?

(Testimony of Robert R. Ashline.)

A. Wherever it is pink in color or red—it is supposed to be red, but it is a little light.

Q. And this entire Pier 1 area is so colored, is that right? A. That's right, sir.

Q. For how long has the City had these maps?

Mr. Yoakum: You mean the Water Department? If you are going to use the word City, I am going to object. I don't see why you won't use Water Department so that we will know and the witness will know and the Court will know what you are referring to.

Mr. Verleger: In order to accommodate counsel, I will be glad to rephrase the question.

Q. I take it these maps are kept in files that are under your general supervision, is that right?

A. That's right.

Q. How long have you had them?

A. These maps have been in the process of being completed since about 1935. In other words, data is gathered, additional [162] soil test data is gathered, and it is added to our maps, and gradually they are expanded out in all areas.

Q. Generally speaking, areas which have any sort of salt water intrusion tend to be highly corrosive, do they not?

A. No, sir. You will notice a red area extends a long way from the salt water line there.

Q. May I ask you, do you recall, Mr. Ashline, we took your deposition on December 13, 1957?

A. Yes.

Q. Do you recall at that time you testified——

(Testimony of Robert R. Ashline.)

Mr. Yoakum: May I please see it?

Mr. Verleger: Yes, sir.

Mr. Yoakum: Is the original on file?

Mr. Verleger: I believe so.

Mr. Yoakum: There is no objection as far as we are concerned to referring to the copy counsel has.

Q. (By Mr. Verleger): The question is—do you want to take a minute to read through this?

A. (Witness complying).

Q. “Q. There are areas, are there not, right down by the bay in San Pedro which have a good deal of salt, in the sense of sea water or salt from sea water, in the soil, is that true?

“A. That is true. [163]

“Q. I gather from what you have said that generally such areas fall in the highly corrosive category, is that right?

“A. Generally, they do.”

A. Yes.

Q. So that again you repeat generally such soils do have, that is, the soils that do have salt fall in this highly corrosive category, is that right?

A. That's right.

Mr. Verleger: No further questions, your Honor.

The Court: I would like to ask the witness a question. What causes one length of cast iron pipe to corrode and another length not to corrode in the same area?

The Witness: This particular pipe made in 1914 was made with a sand cast lining. In other words, it was sand cast pipe. That is the way they were

(Testimony of Robert R. Ashline.)

making pipe at that time. In the process of manufacture it forms a skin from the sand. The molten sand forms a very hard skin on the surface of the pipe, and if that skin is broken during transit, or somebody accidentally hits it with a shovel, or if they should pull a chain over it while trucking it on the truck or rolling it off the truck to the trench site, or drop rocks on it when they are backfilling, if that skin is broken, the corrosion starts at the break of that skin, and in graphitic corrosion once it starts the progress [164] continues depending upon the resistivity of the soil.

The Court: Then I understand you take a length of pipe and if there has been an injury on any part of that pipe, that is, in any part of the length of the pipe either by a blow or any other kind of injury, that corrosion will take place at the point of the injury and not the rest of the pipe, is that right?

The Witness: That's right, because there is a protective film from the high silica skin on the surface of the cast iron pipe.

The Court: From the testimony in the case before the court so far the hole in the pipe was about as big as the palm of your hand. A certain length of pipe was cut out and replaced. Evidently, I suppose the pipe that was replaced was considered in good condition. Would you say it is your opinion that the corrosion was caused by some injury to the outer skin of the pipe?

The Witness: It could have been, yes.

(Testimony of Robert R. Ashline.)

The Court: Could have been. Well, could it have been caused by anything else now?

The Witness: Through studies, we have found that has been the principal cause.

The Court: This injury to the skin of the pipe could have occurred at any time after manufacture?

The Witness: That's right. [165]

The Court: Either in transportation or installation?

The Witness: That's right.

The Court: This injury in the skin of the pipe would have to be of such extent it would be readily visible, or would it be kind of a latent injury?

The Witness: More of a latent injury. I don't believe you would be able to even notice it with your eye unless it would be a real scarred mark from the chain. It would have to be a pretty deep scar.

The Court: The ordinary workmen in installing the pipe would not probably have noticed a slight injury to the skin, and a slight injury would cause corrosion?

The Witness: That's right.

The Court: You probably want to ask some more questions now.

Mr. Verleger: Yes, I want to ask a couple more.

Q. Where you place pipe in soil which is rated as either slightly corrosive or not corrosive at all, and you have these slight injuries, I take it ordinarily you do not have damage to the pipe from corrosion, is that correct?

(Testimony of Robert R. Ashline.)

A. That's right. The rate of corrosion would be slower, then.

Q. It takes the combination, putting the pipe in corrosive soil and some sort of nick or abrasion on the surface?

A. That's right, on sand cast pipe. [166]

Q. Yes, sand cast pipe.

A. On metal mold pipe today it doesn't matter whether you place it in a place where it is slight or severe, it will start right off.

Q. Likewise, I take it it is true that with the sand cast pipe, as well as with the metal mold, there is a considerable experience in damage to such pipe in corrosive soils, is there not?

A. That's right.

Q. And that occurs, I suppose, because such nicks and dents on the surface of the pipe are fairly common in the course of installation, transportation, and what-have-you, is that right?

A. They were at the time these pipes were laid, especially.

Q. So if you have a sand cast pipe laid in a corrosive soil, the probability of corrosion somewhere along the length of the pipe because of the presence of such a nick is pretty high, is that correct?

A. Yes, it is.

Mr. Verleger: I have finished.

The Court: May I ask this witness a question while you are looking up your notes?

Mr. Yoakum: Yes.

(Testimony of Robert R. Ashline.)

The Court: In this particular area, that is in the [167] Harbor area, how many miles of pipe do you now have similar to the pipe that we have been discussing here, if you know?

The Witness: Well, you can see the map there. It is all of the San Pedro and part of the Wilmington area. In fact, all of that is cast iron pipe. There is quite a few miles.

The Court: We are not talking about cast iron pipe. We are talking about pipe made 30 or 40 years ago.

The Witness: We have a line on Signal Street right in the area of the Harbor Department's break that was laid the same year, 1914.

The Court: How long is that?

The Witness: You mean that particular line?

The Court: Yes.

Mr. Yoakum: We have those figures here.

The Court: All right. Maybe I am anticipating.

Mr. Yoakum: I appreciate your Honor's questioning. We would like to put up this map, I for identification.

The Court: On the map, the way you have got it, the main channel is at the top. In the other map the main channel is at the bottom. It will be hard enough to keep this straight without having your map turned around.

Mr. Yoakum: That map doesn't have any direction signs on it and it is misleading. I will get oriented here in just a moment, I hope. Is the top of this map the north, [168] your Honor? The east

(Testimony of Robert R. Ashline.)

channel, strange as it may seem, is to the west. It is not to the east of Pier 1 area.

Cross-Examination

By Mr. Yoakum:

Q. Mr. Ashline, what is this map that we have put up here as Exhibit I for identification?

A. Those are our maps used to show the pipe lines, Los Angeles Water System pipe lines.

Q. That is in the area and out onto Pier 1 from 22nd Street on the north, out on the end of Signal Street?

A. Yes, sir.

Q. Can you step down here and indicate where your line is, and when I say "your line," I am talking about the Water Department's line.

A. (Witness leaving stand and going to map.)

The Court: May I inquire, does any other department maintain a water line there other than the Water Department?

Mr. Yoakum: The Harbor Department maintains the eight-inch fire line that has been identified. If it is not clear yet, it will be that that fire line is westerly of the ten-inch main that is maintained by the Water Department, but that the fire line, the eight-inch line, off of which this lateral came here, this is maintained by the Harbor Department exclusively. Does that answer your Honor's question? [169]

The Court: Do you actually maintain it or do they maintain it just on paper? Is there actual maintenance there?

(Testimony of Robert R. Ashline.)

Mr. Yoakum: They own it. It is under their jurisdiction.

The Court: Who installed it? Did they install it?

Mr. Yoakum: Yes, they installed the eight-inch line; the Water Department installed the ten-inch line that goes down the middle of the street, or approximately the middle.

The Court: Which line was installed first?

Mr. Yoakum: I can't tell you exactly. The lines were installed between 1914 and 1915. I would suppose that the Water Department line would have to be in before we could take any water into our line.

The Court: Do you mean to say one department of the City would go down there and establish a line, put in lines, and after they get through another department of the City would go down and put in a parallel line?

Mr. Yoakum: It parallels it, but it is not for the same function. The ten-inch line is a multi-purpose line.

The Court: Why wouldn't the two lines be put in at the same time by the same workmen?

The Witness: There is no connection between the Los Angeles Water Department and the Harbor System. [170]

Mr. Yoakum: They are just separate departments. I don't know why. They have their own autonomy, the Water Department. I am just assuming this is laying lines to establish connections to

(Testimony of Robert R. Ashline.)

possible consumers, but they are not concerned with what the consumer does within his own yard, as it were. In other words, to serve you, the water company runs a line down in front of your house, and a lateral into a meter, and they don't care how much pipe you lay inside there, so long as you don't abuse it. I don't know whether it was all laid at one time. The plans show that they were drawn in 1914.

The Court: I am interested, because I want to know whether or not there is any real distinction between these two bodies, whether we should keep them separate, or consider them all as part of the City of Los Angeles.

Mr. Yoakum: The matter is under consideration. It is developed in the briefs that have been filed. You will note that under the Charter the Harbor Department is vested with almost complete sovereignty with reference to harbor activities, and that no other department has anything to do with its activities, with the possible exception of the Fire Department. The Water Department doesn't have anything to do with it. It is none of their business if we put in a line or not, if it is on our property. They serve us.

The Court: Go ahead. Proceed. [171]

Q. (By Mr. Yoakum): I wish you would show on this map here by red crayon the Water Department's ten-inch line going down Signal Street. I think instead of trying to draw a line the entire length, let's draw an arrow line to it, draw a red

(Testimony of Robert R. Ashline.)

arrow line to the ten-inch line and then mark out here A-1.

A. (Witness complying.)

Q. Now, that is the Water Department's ten-inch main, right?

A. Right.

Q. Now, then, can you locate on here certain service connections which connect for fire water purposes to the eight-inch—is the eight-inch line of the Harbor Department shown on this map?

A. No, I don't believe it is.

Q. Don't you show the service connections to it?

A. Yes.

Q. You said you don't believe that the eight-inch line is shown. Do you want to correct that or does that testimony still stand?

A. It is not shown as far as I can see. These are railroad tracks in here, so it is rather confusing.

Q. Will you indicate by an arrow and the legend A-2 the place where the Water Department has a detector meter and a Hersey check valve coming off of the ten-inch main? [172]

A. (Witness complying.)

Q. If there is another one of similar character, indicate that and call it A-3.

A. (Witness complying.)

Q. Do you have another one? A. A-4?

Q. A-4, yes. A. (Witness complying.)

Q. Did I ask you, this is a Department of Water map of that area? A. Yes.

Mr. Yoakum: We would like to offer that in evidence as Exhibit I.

The Court: It may be received.

(Testimony of Robert R. Ashline.)

The Clerk: I admitted in evidence.

(The exhibit heretofore marked Defendant's Exhibit I was received in evidence.)

Q. (By Mr. Yoakum): Now, a pipe going down Signal Street—I am talking about your ten-inch Water Department line, unless I otherwise indicate, was laid in what year? A. 1914.

Q. Was that cast iron pipe? A. Yes, sir.

Q. Do you know whether it was the same general type? [173] I have in mind it is larger than the pipe involved in this lawsuit. Do you know whether it was the same general type of cast iron pipe?

A. I believe it probably was the same type.

The Court: Do you know when the eight-inch line was laid?

The Witness: I believe it was laid in 1914.

The Court: Then the ten-inch and eight-inch lines were laid in the same year?

The Witness: I believe so.

Mr. Yoakum: The testimony by way of interrogatories that were read in is to the effect that the eight-inch line was laid in 1914.

The Witness: The exact month, I believe you have a record of the exact months that our pipe was laid, the L. A. Water System.

Mr. Yoakum: I have a record of those here, but I don't have it at the lectern. I will get it at our recess.

Q. Up to March 12, 1956, which was the date

(Testimony of Robert R. Ashline.)

that this pipe in question burst, had the Water Department had any breaks in the line extending south of 22nd Street and southerly out to the end of—

Mr. Verleger: That would be objected to on the ground no sufficient foundation has been laid as to whether [174] this particular witness would know of all breaks.

The Court: Overruled.

Q. (By Mr. Yoakum): Did you get the question? Do you understand the question?

A. Your question, yes.

Q. You may answer it.

A. Is it all right for me to answer?

The Court: Yes.

The Witness: We had one break that I found a record of. The exact year it occurred, I would have to look up that record again, but the location of the leak was near the end of the line which is near the bottom of the map.

Mr. Yoakum: Would you stipulate, Mr. Verleger, that if the witness looked at the answers you have already offered in evidence, his answers to your interrogatories, that the testimony would be that this one break was in 1949, and was about 2,400 feet south of 22nd Street?

Mr. Verleger: If that is what his answers say, I have no objection to so stipulating.

The Court: When you are talking about a break in the line, you are referring to the eight-inch line?

The Witness: No, it is our ten-inch water line.

(Testimony of Robert R. Ashline.)

The Court: The ten-inch water line?

The Witness: Yes, sir. [175]

Q. (By Mr. Yoakum): To clear this up, the Water Department pays no attention to the breaks in the fire line, the eight-inch line, does it?

A. No, sir. We have no jurisdiction over it.

Q. Can you tell us what this break was? 2,400 feet, that would be pretty far seaward, wouldn't it?

A. It is near the end, yes.

Q. What was that due to?

Mr. Verleger: I would object, no sufficient foundation laid, your Honor.

Mr. Yoakum: He has already read it in evidence.

The Court: Overruled.

The Witness: The leak report stated that there was a crack in the cast iron pipe.

Q. (By Mr. Yoakum): Has the Water Department at any time made any studies of pipe installed in the year 1914 or thereabouts by the Harbor Department? A. No, they have not.

Q. I am excluding anything you might have done with reference to this subject pipe after the break, but up to that time? A. Up to that time, no.

Q. Does the Water Department exercise any jurisdiction [176] over pipes installed by the Harbor Department? A. No, sir.

Q. Are you familiar with the practice generally prevailing in Southern California and elsewhere with reference to maintenance of water pipes?

A. Yes, I am.

Q. Is there any practice that you know of for

(Testimony of Robert R. Ashline.)

digging pipes up to inspect them to see if they should be replaced? A. No, sir.

Q. What is the reason, if you know, why that is not done?

A. Well, there are probably several reasons. The first reason is, especially with cast iron pipe, if we dug down to the pipe a normal hole that a man could get at, let's say 2x3 feet in area, he might examine the pipe and find it is in perfect condition. However, one foot away there is a possibility that pipe might be badly corroded.

Another reason is that the cost, I mean of digging the pipes up just to see whether they are corroded or not, would be prohibitive.

I don't believe the public would care too much about having the streets dug up, and how would we arrive at when and how often to dig down.

Q. There is then, I take it, no practice to dig down into the ground to look at buried pipes unless you suspect something wrong? [177]

A. That's right.

The Court: May I ask a question?

Mr. Yoakum: Yes, your Honor.

The Court: What do you do, put the pipe in the ground and leave it alone until it breaks?

The Witness: Generally, the only time that we ever replace a pipe is because of obsolescence. In other words, the pipe is too small, the fire department may want more water in the area, or if we have a section of line that has had recurring leaks and they are going to resurface the street, we will

(Testimony of Robert R. Ashline.)

go in ahead of the resurfacing and either abandon the line or replace it with a new one, or dig it up and replace it with a new one.

The Court: You don't have any system whereby you estimate the life of the pipe line and then change it or replace it at the end of that period?

The Witness: No. At the present time and for some years, I mean since about 1935, we take precautions to protect our pipe against corrosion now. We don't just put it in bare and forget about it. We believe we have well over a hundred year life now on our cast iron pipe that has been laid and is now being laid.

The Court: You put the pipe in the ground and leave it alone unless something happens to it?

The Witness: The City of Philadelphia has cast iron pipe [178] that has been in 150 years. They are not digging it up to replace it.

Q. (By Mr. Yoakum): At the time this pipe was installed around about 1914 or 1915, was this technique known of protection that you say now you use when you suspect highly corrosive soil?

A. As far as I can determine from the research back in old records, there was very little known about the corrosivity of soil in 1914.

Q. What are these techniques that you now use when you have a highly corrosive soil?

A. Well, generally now we in a severely corrosive soil where we formerly used cast iron, we use cement asbestos pipe, and if the pressures are

(Testimony of Robert R. Ashline.)

higher, we will go to cast iron pipe, and if it is in an area where there is sea water or tidal action on the pipe, we use a coal tar enamel over the outside of the pipe.

Q. Those techniques were not in use in 1914, were they? A. No, sir.

Q. Did you get a section of this burst pipe, specifically the bell section here known as G-1, this bell end piece? A. Yes.

Q. At the time you got it, was this little piece here, that [179] is G-2, a part of this bell section?

A. Yes, sir.

Q. And what did you do when you got G-2?

A. I had this section cut off to examine the effects of corrosion, and I etched the surface to brighten it, to show the lines of demarcation where the graphitic corrosion had progressed around the pipe, and to also show by observing this pipe from here——

Q. You mean from the exterior as distinguished from a cross-section?

A. Exterior, that it could retain its full wall thickness even though it is corroded almost halfway through, or over halfway through at this point. The pipe retains its shape even though it is losing strength.

Q. That piece of pipe, when a person dug the dirt up around that pipe, when it was in the ground, could he tell by looking at the exterior of that pipe that any graphitic corrosion was taking place?

A. Not by looking at it, no. I might add, too,

(Testimony of Robert R. Ashline.)

that it is characteristic of cast iron pipe that has been graphitized that when it is out of the ground and exposed to the air, that the corrosion products that are left here will fall off. That is why you observe that some of this is gone.

Q. The product that remains is carbon, is that correct? [180]

A. Carbon and other impurities.

Q. And the iron is taken out by this process?

A. Yes.

Q. When it is first exposed to air after having been buried a long time, this carbon is soft and you can dig into it with a knife or something?

A. Yes.

Q. But then it hardens?

A. Hardens on exposure to the air.

Q. In connection with the studies that you have made, have you ever reported any of these studies or findings to the Harbor Department?

A. No, sir, I never have.

Q. When you have leaks in your Water Department lines, do you report those to the Harbor Department? A. No, sir.

Q. Let me call your attention to Exhibit 28-A, which is this corrosivity map. Does that indicate that even where the land abuts the ocean there sometimes will not be severe corrosivity?

A. What is that?

Q. There are different colors which indicate the severity of the corrosivity, the red being severe, and the green being indicated as slight. My question is,

(Testimony of Robert R. Ashline.)

are there areas that are adjacent to the bay or the sea water where the [181] corrosivity is slight?

A. There are, yes, sir.

Q. To sum it up, there is no uniform pattern that develops, is there?

A. No, because the soils will vary in their classification depending on where they were hauled in from, or whether they were dredged out of the harbor. That is the reason for the lack of uniformity.

Q. Does the Water Department experience corrosivity, a high degree of corrosivity in areas that are inland considerably?

A. Yes. We have areas in the San Fernando Valley and in the central part of Los Angeles that are even more severe to cast iron than this section of Signal Street.

Q. Do you have any near the Wilshire area that you recall?

A. Yes, we have had some very sad experience with cast iron pipe at Wilshire and Curson where a metal mold cast iron pipe failed in less than five years.

Mr. Yoakum: I wonder if we could have this map marked?

The Court: While the clerk is marking that, we will take the morning recess. We will now recess until fifteen minutes after 11:00.

(A short recess.) [182]

The Court: You may proceed.

Q. (By Mr. Yoakum): Mr. Ashline, I show you

(Testimony of Robert R. Ashline.)

what has been marked here as Exhibit J for identification and ask you to tell the court what that represents.

Mr. Verleger: Your Honor, I am going to object on the ground this appears to be a map of the San Fernando Valley, at least counsel so advises me. I have no doubt that graphitic corrosion occurs elsewhere than on the sea shore. At one time we put in some interrogatories concerning corrosion all over the City, and counsel objected to that.

The Court: What is the purpose of this? What are you trying to establish?

Mr. Yoakum: The purpose is to show that this graphitic corrosion, or the area of high corrosive severity, there is nothing unique about that along the sea shore. It happens all over. Counsel apparently makes a point because it is corrosive at the sea shore, that is something that was significant.

The Court: Not necessarily. I said I suppose at the sea shore the more salt there was in the ground, the more corrosive the soil would be. But this witness tells me that is not so. I am going to sustain the objection because I am satisfied that there are other areas, not only along [183] the sea shore, but other areas where they have a high salt content in the soil and high corrosion. I am thinking about down around the Salton Sea. I don't know what happens down there. The ground down there has a lot of salt in it.

May I ask this witness a question?

Mr. Yoakum: Certainly, any time, your Honor.

(Testimony of Robert R. Ashline.)

The Court: When this pipe was installed, as far as you know, was it the best pipe obtainable? I mean by that the cast iron pipe, was it considered to be the best pipe available?

The Witness: I believe it was, sir, at that time. It is still considered—I mean cast iron pipe.

The Court: I am talking about this particular brand of cast iron pipe when it was installed in 1914, as far as you know, it was the best pipe available on the market?

The Witness: I believe so, sir.

The Court: For this sort of work.

The Witness: At that time no one knew much about corrosivity in 1914.

Q. (By Mr. Yoakum): I will show you a document here that has been marked K for identification, consisting of ten sheets, and ask you if those are photostats of records that are under the control of your department? [184]

Mr. Verleger: The witness has already testified that they were laid in 1914. Is this just cumulative?

Mr. Yoakum: No. The court asked how many feet had been laid and I told him I had some records.

Mr. Verleger: All right. That's okay.

Q. (By Mr. Yoakum): What are those?

A. These are commonly called pipe location reports that are filled out by the foreman that supervised the installation of this particular line.

Mr. Verleger: Your Honor, if counsel so stipulates, I am prepared to stipulate these are the

(Testimony of Robert R. Ashline.)

records of laying the original pipe, and we might save a little time that way, of the ten-inch main, if that is what they are.

Mr. Yoakum: That is the ten-inch main, yes, starting north of Signal Street and going out to the water.

We would offer those records as our Exhibit K.

The Court: It may be received.

The Clerk: K admitted in evidence.

(The exhibit heretofore marked Defendant's Exhibit K was received in evidence.)

Q. (By Mr. Yoakum): Now, Mr. Ashline, how many feet of ten-inch pipe are represented by those records there?

A. 5,244 feet of ten-inch cast iron pipe laid under the [185] one report number. The number of the report is 20395, consisting of one to ten sheets.

Q. Would you please step to the board here and show on Exhibit 28 the profile or the course of the pipe indicated on these sheets?

A. Starting on Signal Street at the very end.

Q. That would be at the end of Pier 1?

A. Pier 1, continuing up Signal Street, along Signal, turning on Signal here.

Q. You mean turning west on Signal?

A. Turning west. It turns one block north and then west to Pacific (indicating).

Q. Up to March 12, 1956, with the exception of that one rupture that you testified to occurring in

(Testimony of Robert R. Ashline.)

1949, have you had any trouble with any of this 5,000 feet of pipe?

Mr. Verleger: That is objected to on the ground no foundation is laid. If the question is, does the witness have any records of such trouble under his custody, I don't know.

The Court: Read the question.

(Question read.)

The Court: Do you mean have you personally, or are you talking about the City?

Mr. Yoakum: I mean the Department of Water & Power.

The Court: I will overrule the objection. You can answer [186] that "Yes" or "No."

The Witness: The answer is "No." I might add that we keep a record of every leak that occurs and we have records quite a few years back.

The Court: May I inquire, do the records show you have had no trouble except this one break?

The Witness: That is the way the records show.

Q. (By Mr. Yoakum): It is so indicated on this 28-A, isn't it, that there was no break except that one?

A. That's right, sir.

Q. I don't know whether it has been made clear or not. This 5,244 feet was laid when?

A. In 1914.

Q. Did you get some water samples from under Berth 59?

A. Yes, I did.

Q. That was rather recent, was it?

A. Yes, sir.

(Testimony of Robert R. Ashline.)

Q. When was it?

The Court: Counsel, just a minute. You say water samples under the Berth? You mean water from the bay or the harbor?

Mr. Yoakum: I will develop that.

Q. Do you know what was done to obtain the samples? [187]

A. As far as I know, the sample was taken——

Mr. Verleger: Objected to, your Honor, on the ground that no foundation has been laid as to whether the witness was there or somebody told him or what.

The Court: He is trying to lay a foundation. I want to know what you mean by water sample and what kind of sample did you take.

Mr. Verleger: Did the witness take it?

Mr. Yoakum: I was trying to lay it with this witness, but there is another witness we will have later that actually dug the hole.

The Court: Maybe you can tell us where the sample was taken from and when it was taken and by whom it was taken.

Mr. Yoakum: I can tell you from records in my possession, and we will tie this up with proof later on, that there was a vertical test hole dug a short distance west of the shed 59 in June of 1958, and they went down a depth of about 7½ feet under the floor of shed 59, and at that time they were below high tide line, the high tide being approximately 6 feet. Two samples were taken, one at 10:00 a.m.

(Testimony of Robert R. Ashline.)

and another at 7:00 p.m., 6/27/58, and the samples of this water were turned over to this witness.

The Court: This shed is built upon ground, upon earth. [188] It is probably a fill, but nevertheless it was earth. You get down and you take a water sample. Do you mean to say the earth was water loaded, or did they go clear down to a pool of water?

Mr. Yoakum: Of course, I wasn't there, but I will tell your Honor what we expect to show. We expect to show at the time they took this sample they did discover a little—I don't know whether you would call it a freshet or a very, very minor subterranean stream, and they took some of this water and analyzed it.

The Court: What difference does it make?

Mr. Yoakum: There has been a suggestion that there was salt water intrusion in here. The shed was 100 feet, this place where the break occurred, it covered part of the shed, there was a large dock on the seaward side, and then there was this ten-foot wide dock on the landward side under which this pipe burst, so we were at least 150 feet in from the sea there, and we didn't have salt water intrusion. We found water, but we didn't find any salt water.

The Court: Counsel, if I understand the plaintiff's case, and maybe I don't understand it, but if I understand the plaintiff's case, the plaintiff is claiming negligence. First, there might be negligence of installation. We have had no evidence so far

(Testimony of Robert R. Ashline.)

about any negligence of installation. [189] So far as we know, the pipe was installed correctly.

There might be negligence of manufacture. They might have used a second grade pipe, or they might have used defective pipe. There is no evidence to show that. In fact, this witness testified a moment ago as far as he knew this was the best available type of pipe on the market.

The only negligence I think that the plaintiff has established at all is the fact that the pipe was installed in 1914 and then allowed to sit there until it burst. The burst was caused from corrosion. I don't know what the City could have done about the condition of the soil at that particular time.

The only argument that the plaintiff is going to be able to make is that the City knew that this was in highly corrosive soil and they were negligent in allowing the pipe to remain in the soil that long a period without either digging it up and replacing it, or digging it up and looking at it. That is the case, as far as I know.

Whether or not there was water in the soil or whether or not the water was fresh water or salt water, I don't know, and don't particularly care.

The soil was corrosive and it may very well be that the court could decide that the City or the Harbor Department, or whoever was responsible, was negligent because they let the pipe sit there for such a long period of time, [190] for 40 years. But, however, we have got testimony of this witness in the record that in Philadelphia similar pipe

(Testimony of Robert R. Ashline.)

stayed in the ground and was usable for 100 years.

Mr. Yoakum: I think the matter is really rather a side issue and I wouldn't attempt to develop it except for a couple of questions that the court asked about salt water intrusion, and I think your remarks have cleared up my problem.

The Court: I made that remark because I had the wrong impression. This witness is an expert. He told me I was wrong. I am willing to take his word for it. You don't have to convince me any more that I was wrong.

Mr. Yoakum: All right, your Honor. I will pass by that subject then.

Q. Has the Water Department ever had any practice of digging up cast iron pipe, old cast iron pipe that has not given you any trouble, merely because you knew it was in a highly corrosive area?

A. No, we have not.

Q. What is the usual pressure maintained on your ten-inch line down in Signal Street? I am, of course, referring to the year 1956.

A. I believe around 60 pounds per square inch.

Q. Do you know where the City gets this water that is run into this ten-inch main? [191]

The Court: Well, now, again, counsel, I think we are going outside the issue, because if there is any corrosion here, the corrosion came from the outside, and there is no claim, as far as I know, that the corrosion came from the inside.

Mr. Yoakum: That is correct, your Honor. The witness, I think Mr. Drake was his name, a chemist,

(Testimony of Robert R. Ashline.)

testified that he found in a gram of earth chlorides.

The Court: That's right. This may be important to show that some salt could have come into the earth from the water.

Mr. Verleger: Your Honor, I have to object, nevertheless, to introduction of evidence about this sample if that is what is being done, because my understanding on counsel's representation is that they went down $7\frac{1}{2}$ feet. My understanding is the pipe is laid 8 to 9, according to the answers.

Mr. Yoakum: I am past that.

The Court: You better catch up. You are way behind.

Mr. Verleger: I am sorry.

Mr. Yoakum: I have passed that subject, Mr. Verleger.

The Court: Objection overruled. Read the question.

(Question read.) [192]

The Witness: Yes, I do.

Q. (By Mr. Yoakum): Where does it come from?

A. At certain times of the year the water comes from our reservoir that is filled from the Metropolitan Water District line, and that water in turn comes from the Colorado River.

Q. You said certain times of the year. Being specific, would you know as to the month of March, 1956?

A. I would have to check our records at that time.

(Testimony of Robert R. Ashline.)

Q. Would you be able to do that during the noon recess? A. I would.

Q. Would you please do that? You examined this Exhibit G here just before your deposition was taken some eight or nine months ago, did you not?

A. Yes, I did.

Q. At that time was it in one piece or in two pieces?

A. As I recall, it was in two pieces.

Q. From your observation of the break, you concluded that a certain process of deterioration had taken place, is that right? A. I did.

Q. That is what you call graphitic corrosion?

A. Graphitic.

Q. In other words, through some chemical process that [193] I don't understand the iron is all removed from the pipe. When you look at the piece of pipe from the outside, you cannot tell, can you, whether it has been subjected to graphitic corrosion? A. Not from visual observation.

Q. With reference to the soil tests that you saw on 28-A, do you have any knowledge of when the tests were taken in the area of Pier 1?

A. I believe that I would have to check my records for the exact date of the test in that area.

The Court: There is no dispute, is there, that this pipe was installed in highly corrosive soil? There is no dispute on that. Regardless of when the map was made, whether it was made last year or ten years ago or thirty years ago, the fact still remains that the soil was highly corrosive.

(Testimony of Robert R. Ashline.)

Mr. Yoakum: I don't know. I can't answer that, because I don't know enough about the technicalities of it. I take it at the time the tests were made the soil was highly corrosive. Whether it was highly corrosive five centuries ago or 50 years ago or 40 years ago, I don't know anything about such a subject, so I couldn't stipulate. Maybe soils change in their character due to some chemical organization of the earth. I wouldn't be able to stipulate.

The Court: I thought that maybe this was a fill, that [194] you brought soil in from outside, from a non-corrosive area, but evidently you haven't got any evidence along that line.

Mr. Yoakum: I think our interrogatory answers said we do not have records of where that soil came from.

The Court: I think I am going to find that the soil was corrosive at the time this map was made. We have no evidence that it was corrosive at the time the pipe was installed. I don't think there is going to be any dispute unless you have got some evidence that the pipe was installed in non-corrosive soil and it became corrosive after it was installed and the defendant didn't know about it until they made these tests.

Mr. Yoakum: There is no evidence that the Harbor Department ever knew about it being corrosive until after this break occurred. The Harbor Department had never heretofore had any corrosion breaks, and the record is clear, I think, that the

(Testimony of Robert R. Ashline.)

Harbor Department was not informed of the studies made by the Department of Water & Power on its pipes. So if your Honor makes a finding, although I think that it may involve an assumption, that the soil was corrosive when the pipe was installed, I can't argue with you on it, because I don't know about the chemistry of such things, but I can repeat and respectfully urge you that there is no evidence thus far, and it is all to the contrary, that the [195] Harbor Department had no knowledge of the soil's corrosivity.

Just let me check my notes a moment, please.

The Court: I think the evidence would also sustain a finding, at least at this time, when the pipe was installed, although the soil was highly corrosive, the installers, the City or the Harbor Department didn't know it, because the witness has testified at the time in 1914 they did not know anything about this question of corrosion.

Mr. Yoakum: We have nothing further except that one matter concerning which I was going to check at noon time, your Honor. Thank you.

The Court: He can come back after lunch.

Mr. Yoakum: Thank you for letting me examine him out of order.

Mr. Verleger: You are welcome, counsel. I just have a couple of questions.

The Court: Go ahead.

(Testimony of Robert R. Ashline.)

Redirect Examination

By Mr. Verleger:

Q. You testified, Mr. Ashline, you can't tell whether pipe has graphitic corrosion simply by looking at it. I take it if you open it up for inspection and scratch away and find the pipe is actually soft, you will ascertain the softness, will you not? [196] A. Yes.

Q. And by the same token, by hammering on it it is possible sometimes to tell, as I think Mr. Brashier testified earlier, whether the pipe is soft or not? A. That's right.

Q. So if you do open the pipe up and move it, there are ways of finding out?

A. Ways of finding out, yes.

The Court: May I ask this witness a question?

Mr. Verleger: Yes.

The Court: Assume we have a pipe line that is 5,000 feet in length. Some question has arisen as to whether or not there is corrosion. You decide to make an investigation to see whether there is corrosion. You have to open the entire line, do you not?

The Witness: Yes.

The Court: You would have to look at every inch of that pipe line?

The Witness: That's right.

The Court: Because there could be corrosion in one spot and ten inches away there would be no corrosion?

(Testimony of Robert R. Ashline.)

The Witness: That is correct.

The Court: In order to make an inspection, actual inspection, you would have to open the pipe line and you would have to examine it carefully, top, bottom, and on the sides? [197]

The Witness: Yes.

The Court: Every inch of it?

The Witness: That's right.

Q. (By Mr. Verleger): Further, Mr. Ashline, you said earlier in Philadelphia they had 150 years experience of life with pipe. Where you have pipe in highly corrosive soil, you do not expect any such life for the pipe, do you?

A. Well, generally not, but there are exceptions.

Q. There are exceptions, but generally you don't. Mr. Ashline, back in May, 1938, you prepared an article in the American Water, Journal of the American Water Works Association, on testing of soils prior to installation of metal pipes, and you prepared some charts on the life of pipe in years in corrosive soils where it is poorly protected, isn't that right? A. That is poorly protected pipe?

Q. Yes, poorly protected or unprotected pipe in corrosive soils. A. Yes.

Q. The charts you prepared indicated a life of ten to perhaps twenty years for pipe in such soil?

A. That's right.

Q. Is that correct?

A. Sometimes even less. [198]

The Court: This pipe, would you call the pipe installed here protected or nonprotected?

(Testimony of Robert R. Ashline.)

The Witness: It was unprotected pipe as far as present day practices are concerned.

Q. (By Mr. Verleger): One other factor. The information that the Water Department has collected with respect to corrosive areas is generally available to those who have need for it, is it not?

Mr. Yoakum: First, I will object on the ground it is immaterial as far as the Harbor Department is concerned.

The Court: Overruled.

Q. (By Mr. Verleger): Will you answer the question? A. May I have the question again?

(Question read.)

A. That is true. We furnish all of our consumers on an annual basis with any soil information to help mitigate any corrosion problem they might have. That is usually on request.

Q. But the information is freely available?

A. Yes.

Q. One further question. The testimony was that the Water Department has meters and a check valve in Signal Street there. Those meters are equally available for the examination of your customers and your own people, are they not? [199]

A. I believe they are.

Q. There was some discussion concerning your experience with respect to corrosion along Signal Street in this pipe line here. You have had a number of breaks due to corrosion just around the corner on 22nd Street here, have you not?

(Testimony of Robert R. Ashline.)

A. Yes, we did.

The Court: How many breaks due to corrosion?

The Witness: I believe they are marked there, your Honor.

Mr. Verleger: Approximately six are indicated, your Honor.

The Witness: About six breaks, and that section of line was replaced.

The Court: When was that section of line installed, if you know?

The Witness: I would have to check our records for that. I can get that.

The Court: Was it the same kind of pipe as this ten-inch pipe we have been talking about?

The Witness: I would have to check the pipe laying records to find out. I don't even know right now whether it was cast iron pipe or not. I will have to check the records. I think it is cast iron.

The Court: I wish you would check and find out what kind of pipe and when it was installed. [200]

The Witness: I will.

Mr. Verleger: It might help if you check the testimony on the deposition.

The Witness: That's right. It was all cast iron pipe.

Mr. Yoakum: The court, as I understand it, asked you to check the pipe laying records.

The Witness: That is on 22nd Street?

Mr. Verleger: That's right.

Mr. Yoakum: That is west of Signal Street here, I believe.

(Testimony of Robert R. Ashline.)

The Witness: I will check that. Do you have the date of the leaks?

Mr. Verleger: The date of installation and the date of the leaks are covered in the interrogatories, and it is indicated they are cast iron pipe.

The Witness: If you have the date of the leaks, there is no need for me to look it up.

The Court: I would like to know when the pipe was installed.

The Witness: He has it.

The Court: He has it?

The Witness: He has the date it was installed, I believe.

The Court: Can you tell us when it was installed? [201] Is it in the interrogatories?

Mr. Verleger: There are leaks shown, your Honor, in a pipe installed in 1934 on 22nd Street; failure in 1940, again on pipe installed in 1934; failure in 1941——

Mr. Yoakum: Where are you reading from?

Mr. Verleger: I am reading from page 4 of the additional answers to interrogatories with various numbers received by us July 17, 1957.

Mr. Yoakum: You say you are reading from page 4?

Mr. Verleger: Page 4. 22nd Street, installed 1934, failed 1941.

There is another, 22nd Street again, installed 1934, failure 1941. 22nd Street, installed 1934, failure '41. Another on 22nd Street, installed 1934, failure 1942.

(Testimony of Robert R. Ashline.)

The Court: And there was a failure in 1940, three in 1941 and one in 1942.

The Witness: Failure by corrosion.

The Court: Failure by corrosion.

The Witness: That was before we had protection of cast iron pipe.

The Court: The pipe installed on 22nd Street was the same kind of pipe, cast iron pipe was installed such as this ten-inch pipe or eight-inch pipe?

The Witness: It is not necessarily the same type of cast iron pipe. [202]

The Court: I wish you would look up and find out what kind of pipe it was. It may be it was a different type of pipe.

The Witness: There was metal mold cast iron pipe at that time, which is more readily attacked.

The Court: You look it up and find out what the records show as to what kind of pipe it was.

Mr. Yoakum: Will you make a note of that so you will be sure to do it?

The Witness: I will.

Q. (By Mr. Verleger): In addition, there appear to be just sort of across the way here on Beacon Street, there appear to be something in the order of nine breaks in cast iron pipe indicated, and those also—as I understand it, this map covers only corrosion failures, so those also would be corrosion breaks in cast iron pipe? A. Yes.

The Court: Will you look up that and see when that was installed?

(Testimony of Robert R. Ashline.)

The Witness: They have the record when it was installed.

The Court: And what kind of pipe was it? It may be possible you are using a different kind of pipe.

The Witness: What is the name of the [203] street?

Mr. Verleger: Beacon Street.

Mr. Yoakum: Do you wish him to check on Beacon Street, as well as 22nd?

The Court: Yes.

Mr. Verleger: No further questions.

The Court: There is something else I would like to have established. I don't have this established in my mind yet. Assuming when this ten-inch or eight-inch pipe in 1914 was installed that neither the City nor the Fire Department knew that the soil was corrosive, I would like to know when the City first found out that the soil was corrosive and when the Fire Department first found it out.

Mr. Verleger: The Harbor Department, you mean?

The Court: I mean the Harbor Department. Evidently, from counsel here, the Harbor Department doesn't know it to this day.

Mr. Yoakum: From these studies that have been made, I think the witness has testified that they were not cognizant of corrosion problems until he started his studies about 1934. Maybe I am saying something he didn't testify to, but that is my recollection. Maybe that answers your question.

(Testimony of Robert R. Ashline.)

The Witness: I can get the date we made tests in that area for you at the same time I am getting this other data. I might add that since 1935 we make soil corrosivity [204] surveys prior to the installation of pipe lines. We don't make the test after they are installed. We determine the corrosivity of the soil along the route the pipe will be laid and protect our pipe accordingly. The tests that were made out in that area and practically all of the San Pedro area, were made prior to installations or when a failure occurred. In other words, if we replace a fire hydrant anywhere in the San Pedro, or anywhere in the City of Los Angeles, we make a soil test. I mean that is just a small section of pipe that is being put in, but if we replace any pipe, we make quite a few tests along the line.

The Court: May I ask a question about your job? You are an engineer?

The Witness: Yes.

The Court: You work for the City of Los Angeles?

The Witness: I work for the Los Angeles Water System.

The Court: I am trying to find out, do you work for the City of Los Angeles, assigned to the Water System, or do you work directly for the Water System? Are you paid by the City of Los Angeles?

The Witness: I believe so.

The Court: What does your check say? That is a pretty good indication of who employs you.

The Witness: I have cashed my check this

(Testimony of Robert R. Ashline.)

morning [205] already. It doesn't say on this stub. It comes out of the Treasury of the City Hall, I do know that. It is through our revenue water fund.

The Court: Don't you engineers that work for the City and all of its branches have some sort of an organization? Do you ever get together and talk over mutual problems?

The Witness: We have several engineering organizations that would take in some of the City engineers, but we are not generally classed as City employees in a sense.

The Court: I am trying to find out about this. You found out that this soil down here was corrosive. Didn't you ever tell any of the other engineers of the City, "You have got a corrosive condition down there?"

The Witness: Only within my own organization.

The Court: You never discussed this with engineers for the Harbor Department?

The Witness: Never have. I didn't even know that they owned that line until this came up. We have similar installations with the studios, of fire meters and fire services, the same as this.

The Court: When you found out for the Water Department that you had a corrosive condition down there at the Harbor, you never went to your brother engineers who had similar problems and said, "Here, there is a corrosive condition down there. You better check into it and see what [206] effect it is going to have on you?" You never did that?

The Witness: I never have.

(Testimony of Robert R. Ashline.)

The Court: You just kept it to yourself?

The Witness: I have published quite a few articles. Maybe they have read some of them. I don't know. I have given quite a few talks to the Western Plumbing Society and American Water Works Association.

The Court: May I inquire, how many miles of water line does the Harbor Department maintain down there?

Mr. Yoakum: We will offer in evidence——

The Court: Just tell me.

Mr. Yoakum: On six, eight and ten-inch is all I have got the figures on, and it is over ten miles.

The Court: The Harbor Department?

Mr. Yoakum: Yes, about 55,000 feet. We will offer the evidence.

The Court: The Harbor Department never told anybody the soil was corrosive down there?

Mr. Yoakum: The Harbor Department didn't know it. The Water Department never told the Harbor Department.

The Court: Did the Harbor Department know it was corrosive?

Mr. Yoakum: No. There will be no evidence that I know of that they did know it. Our evidence will be that they know it now. [207]

Mr. Verleger: Mr. Wakeman did testify he knew about graphitic corrosion, he knew it was prevalent in areas of this sort. That would seem to be enough to put a competent engineer on inquiry, at least.

The Court: I don't know.

Mr. Yoakum: He wasn't even working there when the pipe was installed.

The Court: We have got here two legal entities and it is just possible knowledge of the Water Department wasn't knowledge of the Harbor Department.

Mr. Verleger: Your Honor, I don't think they are legal entities in that sense. They are divisions.

The Court: All right, divisions.

Mr. Yoakum: You read the Charter and you will see the autonomy. I think the Charter will answer the question about where he gets his pay, too. He gets it from the Water Department. They have their own budget.

Mr. Verleger: Your Honor, when we want to sue somebody, we have to sue the City of Los Angeles. We can't sue the Harbor Department.

The Court: That's right, but they say, "We didn't know." This is a technicality. It is 12:00 o'clock. We will take the noon recess. We will recess until 2:00 o'clock.

(Whereupon at 12:00 o'clock noon, an adjournment was taken until 2:00 o'clock p.m. of the same date.) [208]

Wednesday, October 8, 1958, 2:00 P.M.

The Court: You may proceed.

Mr. Yoakum: May it please the court, just at the noon recess we were more or less having a little colloquy about the charter provisions and powers of different departments. During the recess I made a

note of some of them and I can give them to you now, if you would be interested in having them.

The Court: All right.

Mr. Yoakum: For example, in Section 139 the powers of the Board of Harbor Commissioners are defined.

In Section 220 the powers of the Commissioners of the Department of Water and Power are defined.

In Subsection 5 of Section 220 it is provided that the Department of Water and Power may be sued or sue. There are numerous cases where the Department of Water and Power is a litigant without the City being involved in the case. There are two of them that we jotted down during recess. One was in the Ninth Circuit, Department of Water and Power against Anderson, 95 Federal (2d) 577, and a California case, Department of Water and Power against Vroman, 218 Cal. 206. At 216 of that opinion the court discusses the broad, wide, extensive powers this Department of Water and Power possesses.

Section 221 of the charter provides that none of the [209] money in the water revenue fund shall be used for any purposes except as herein stated. The first purpose that they enumerate is that they shall pay out for their necessary expenses of running and maintaining their works.

In Section 220.1 they are given the power to establish their own retirement, disability and death benefits.

In 229, Subsection 2a, they are given the power to borrow money and issue revenue bonds and other bonds. Certain of the bonds they can do without any permission of the city fathers.

In Section 222 they are permitted to adopt a special budget.

In Section 345, it is provided that both the Harbor Department and the Department of Water and Power, neither of them are subject to the general city budget.

I give that brief reference to the charter provisions to show the broad autonomous powers these departments have, and particularly the Department of Water and Power, which has even broader powers than the Harbor Department.

The Court: All right. Call your witness. [210]

ROBERT R. ASHLINE

the witness on the stand at the time of recess, being heretofore duly sworn, was examined and testified further as follows:

Recross-Examination

By Mr. Yoakum:

Q. Now, Mr. Ashline, I think the court asked you to determine when you first made soil tests on Signal Street, the Water Department.

A. The first soil tests on Signal Street were made in 1946, and later more in 1949, and some in 1952.

Q. Were you able to ascertain the type of cast iron pipe that was used on 22nd Street just a short distance west of Signal Street where you had a series of five or six breaks all at one time?

A. Yes, I was. Our reports show that the pipe was laid in 1934 and was Delahant cast iron pipe.

(Testimony of Robert R. Ashline.)

Q. Was it sand molded?

A. That is a metal molded pipe.

Q. Metal molded pipe? A. Yes, sir.

Q. The pipe that went down Signal Street, that 10-inch pipe that you identified this morning as having been made in 1914, in excess of 5,000 feet, that was what kind of pipe?

A. That was sand cast pipe. [211]

Q. Does sand cast pipe hold up better than this metal mold? A. Much better.

Q. Now, then, you were also asked to try to find out the type of pipe on Beacon Street. What did you find out in that respect?

A. I found that our pipe reports show it was laid in 1924 and there was no marking on the report other than it was cast iron pipe, so I could not be sure what type it was.

Mr. Yoakum: According to my notes, that answers the questions propounded by the court. I have nothing further of this witness.

Mr. Verleger: I have just a couple.

Redirect Examination

By Mr. Verleger:

Q. Your testimony was your first tests in Signal Street, Mr. Ashline, were in 1946, and the second in 1949? A. Yes, and 1952.

Q. I have here a document entitled "Progress Report of Studies of Graphitic Corrosion of Cast Iron," by Robert E. Ashline and William E. Karl, March, 1941. Do you recognize that report?

(Testimony of Robert R. Ashline.)

A. Yes, sir.

Q. That is a report you prepared? [212]

A. It is.

Q. I want to call your attention to this. There is a table, Table 1-A in this report, which gives field locations of soil samples listed in Table 1. Down there there is a sample 38-H-192, Signal Street, 49 feet north of warehouse, San Pedro. That would have been a test on Signal Street, would it not?

A. Yes, sir.

Q. And north of warehouse would be one of these warehouses over on the sketch, I assume, wouldn't it? A. I believe it would.

Q. Then there is a second one indicated here, 30-H-100, Signal Street, 29 feet north of warehouse, San Pedro. That again would have been one taken prior to 1941 on Signal Street in that vicinity, is that correct?

A. These were soil samples that were tested, not tests made there.

The Court: They were what?

The Witness: These were soil samples that were tested. These were tests we made on the spot.

Q. (By Mr. Verleger): But previous to the tests you made on the spot, back before 1941 you ran soil tests on that area? A. Yes.

Q. I notice that this is described as field locations of soil samples listed in Table 1. Table 1 is captioned [213] "Quantitative Analysis of Typical Soils in Los Angeles That Cause Graphitic Corrosion of Cast Iron." 38-H-192 appears there. I take

(Testimony of Robert R. Ashline.)

it then you had experience with the graphitic corrosion of cast iron on Signal Street before 1941.

A. I don't know whether we had a failure before that time.

Q. But the table would indicate that this is a soil which caused graphitic corrosion of cast iron prior to 1941 in Signal Street?

A. We sampled typical soils all over Los Angeles.

The Court: Just a minute.

Mr. Yoakum: I object to that. Counsel is testifying that this table indicates that. It may and it may not. I can't interpret it as to whether it indicates that.

Mr. Verleger: Suppose we ask the witness again.

Q. Again you state here Quantitative Analysis of Nine Typical Soils in Los Angeles That Caused Graphitic Corrosion of Cast Iron. What did you mean by soils that caused graphitic corrosion in cast iron?

A. Well, we probably had experience in that type soil.

Q. So that the sample 30-H-192 from Signal Street was a sample of soil of a type, at least, which had been known to cause graphitic corrosion of cast iron prior to that time, is that right?

A. That's right. [214]

Q. And it may have been a sample of soil taken from the immediate vicinity of such corrosion, is that right?

A. That's right.

Q. Similarly, 30-H-193, Signal Street, 29 feet north of warehouse, San Pedro, which again refers

(Testimony of Robert R. Ashline.)

to a sample on this table 1, is a sample of soil which was either of the type which caused graphitic corrosion of cast iron pipe or had actually caused such corrosion, is that right?

A. I don't know whether it actually had yet or not, whether we observed it, but in this particular group of soils, we knew they had had graphitic corrosion in San Pedro long before this date even.

Q. It is true, is it not, long before 1941, actually graphitic corrosion had been particularly troublesome in the harbor area, isn't that true?

A. It had been troublesome all over the area of Los Angeles.

Q. My question is, wasn't it particularly troublesome in the harbor area? A. It was, yes.

Q. I think you testified that this pipe up here on 22nd Street that failed was not of the sand mold, but was a different type?

A. That's right.

Q. Again, I would like to show you your testimony when [215] your deposition was taken, and call your attention to the testimony you gave at that time explaining the breaks in the pipe at that time.

Mr. Yoakum: What is the page number?

Mr. Verleger: Page 49, Mr. Yoakum. It starts down here, if you want to read through it before I ask the question.

Q. Isn't it a fact that you testified as follows: The question was:

“With respect to the particular indications of a

(Testimony of Robert R. Ashline.)

series of corrosion breaks which Mr. Verleger interrogated you on, on 22nd Street showing six dots along in a row, can you tell us or give us an explanation of the close proximity of such breaks along in a row there; what would be your view of the cause of those breaks close together?

“A. The close proximity of these leaks, we believe, is caused from a higher concentration of salts perhaps in the soil and the damaging of the skin of the pipe at some time or another in transit or by workmen at the time that they laid the pipe, breaking the natural protective skin of the pipe and allowing corrosion to progress at the point of abrasion. The early manufactured cast iron pipe was made in a sand mold which provided a high glass-like finish, you might say, skin, on the pipe, which afforded very good protection, and if that skin is broken, we have found instances where [216] the chain marks—I mean we have found instances where the chain marks were outlined on maybe a third of the outside diameter of the pipe as a result of being tightened down on the pipe and then placed in a severely corrosive soil, and you have eventual failure.”

That was your testimony at that time, was it not?

A. Yes, sir.

Q. Then to revert back to the question I asked you previously, there is no doubt, I take it, that your department at least had knowledge that the soil in Signal Street was highly corrosive going back as far as 1941?

A. Yes, we knew it then.

Mr. Verleger: Nothing further, your Honor.

(Testimony of Robert R. Ashline.)

Recross-Examination

By Mr. Yoakum:

Q. Calling your attention to your deposition, the assertion that was just read from it, were you trying to tell the counsel at that time the date that the pipe had been made, the type of pipe it was?

Mr. Verleger: That is objected to as calling for a conclusion of the witness. The witness' testimony speaks for itself.

The Court: Sustained.

Q. (By Mr. Yoakum): Do you have written records showing [217] the kind of pipe that was installed on 22nd Street, which you told us a few minutes ago was metal molded? A. I do.

Q. You don't have them with you?

A. I looked that up this noon.

Q. I am going to ask you then if you are excused if you will go down there and just——

A. I have it here.

Q. You just have a pencil note.

A. You want the actual record?

Q. Your testimony is being challenged, you see, by Mr. Verleger, so I want you to bring up the original records showing the kind of pipe that was laid along 22nd Street there at the place where these little breaks occurred. A. All right.

Mr. Yoakum: That's all I have. Any further questions?

Mr. Verleger: Nothing further.

The Court: You may step down.

(Witness excused.)

The Court: Call your next witness.

Mr. Verleger: Mr. Berry, will you take the witness stand, please? [218]

JACK BERRY

called as a witness by and on behalf of the plaintiff, having been first duly sworn, was examined and testified as follows:

The Clerk: State your name, sir.

The Witness: Jack Berry.

The Clerk: How do you spell your last name?

The Witness: B-e-r-r-y.

Direct Examination

By Mr. Verleger:

Q. Mr. Berry, by whom are you employed?

A. Outer Harbor Dock and Wharf Corporation.

Q. What is your job with them?

A. Vice president.

Mr. Yoakum: I didn't hear, sir.

The Witness: Vice president.

Q. (By Mr. Verleger): Where do you work normally?

A. At Berth 57 and 53. 57 at present.

Q. Do you also spend a great deal of time in the area under discussion here, Berth 59?

A. Almost every day.

Q. You are present in that area almost every day

(Testimony of Jack Berry.)

for a portion of the time, is that correct? [219]

A. Correct.

Q. Was that true back in March, 1956, and previously? A. Yes, sir.

Q. For how many years before March, 1956, had that been true? A. Since 1932.

Q. Can you tell us very briefly what the space at Berth 59 is used for?

A. By our company? It is used to receive cargo from trucks and rail cars to haul into the warehouse. I am speaking now of cargo going out on ships, to be held until the ship arrives, at which time they are placed on vessels. Also in reverse, cargo being discharged from a vessel are held on Berth 59 until the consignee picks them up.

Q. With respect to the goods that were involved in this particular wetting episode, that is, particularly the goods of the plaintiff, that is Grace & Co. (Pacific Coast), were they in the category of goods that had been discharged from a ship and were waiting to be picked up? A. They were.

Q. Is Outer Harbor Dock & Wharf Company the only company that is ever allowed to use this space? A. No, sir.

Q. Does the City sometimes place the goods of other individuals in the space? [220]

A. Yes, sir.

Q. In addition to that—well, who maintains the facilities there?

A. Los Angeles Harbor Department.

Q. That is the City does all the maintenance,

(Testimony of Jack Berry.)

is that right? A. Yes, sir.

Q. Just one further question. You are generally aware, I take it, of the fact that there is a sprinkler system in that building, are you? A. Yes, sir.

Q. Just as a matter of description, what is the outer wall of this building made of?

A. Poured concrete or steel, I don't know which. It is a combination of both.

Q. Is the piping that goes up to the sprinkler system, and also goes to the fire hoses, along the side within view? A. Yes, sir.

Q. It is not hidden away within any walls or anything of that sort?

A. No. It is on the walls.

Q. In the three months prior to the March 12th episode, had you observed any leakage coming out of any of the various facilities of that system above ground? A. No, sir. [221]

Q. Had you ever observed any evidence that longshoremen had sprayed water from this system around about the premises anywhere?

A. No, sir.

Q. In the entire time that you have been there, have you ever known them to do that?

A. No, I have not.

Q. Would it have been possible to do this within Berth 59 without actually getting cargo wet?

A. For the longshoremen to do this?

Q. Yes.

A. If the warehouse were halfway empty and

(Testimony of Jack Berry.)

they were working within that area, it would be possible.

Q. It could be done?

A. It could be done, yes.

Q. But so far as you can recall, it was not, is that right?

A. No, indeed.

Mr. Verleger: Nothing further.

Cross-Examination

By Mr. Yoakum:

Q. Did you say, Mr. Berry, that the City stored goods in the transit shed?

A. No, sir. [222]

Q. I understand you are the vice president of Outer Harbor. Just what are your specific duties, or what were they in the years 1955 and the early part of 1956?

A. I was directly under the operating manager.

Q. What did you do in that connection?

A. I was in complete charge of all the outside operation relative to stevedoring and terminal work within the area.

Q. How many berths did your company service, if that is a correct term, over which you personally had charge?

A. At that time?

Q. Yes, in 1955 and early 1956.

A. Five berths in the San Pedro area and one in Long Beach.

Q. What were they?

A. Berths 51, 52 and 53, Berths 58 and 59, or 59 and 60, I don't recall. There was a period that

(Testimony of Jack Berry.)

we did not have 58, at which time we were operating Berth 60.

Q. 58 and 60, when the fire walls are closed, is one long shed, isn't it, 1,800 feet?

A. 58 and 60?

Q. 58 through 60. A. That is correct.

Mr. Verleger: By that you mean 58, 59 and 60?

The Witness: 58, 59 and 60. [223]

Mr. Yoakum: Yes, 58 through 60.

The Witness: One complete berth with two fire walls.

Q. (By Mr. Yoakum): You wouldn't have cargo in there in all of those sheds at the same time, would you?

A. At times we had, yes, many times.

Q. But other times you would have cargo in one of the sheds and not in another?

A. That is correct.

Q. Would the fire walls be closed at times?

A. You mean the fire doors?

Q. Yes.

A. The fire doors are closed when we are not working cargo—if we are working in 58, we close the fire doors to the other two sheds.

Q. How much time would you say you spent in 58, 59, and 60 per day in the year 1955 and the first three months of 1956?

A. It is rather difficult to answer. It would all depend on how busy we were in that area where we are working. If we had ships there, I would probably spend as much as two or three

(Testimony of Jack Berry.)

hours a day. If there were no vessels there, I would spend no time there to speak of.

Q. Were your crews working at times when you personally were not there? [224]

A. Yes, sir.

Q. Can you give an estimate of how much time a crew would be working in a day compared to the time you would be there? You say you were there perhaps two or three hours at a time. Would a crew be perhaps working an eight-hour shift?

A. They were working a nine-hour shift at that time. I would say approximately a quarter of the time.

Q. Did you ever see any of the fire hoses down on the floor?

A. I have seen them on the floor, yes.

Q. Did you ever ask anybody why they were down there?

A. Yes, indeed.

Q. Do you know Mr. Brashier?

A. Yes, sir.

Q. Did you ever ask him?

A. No, because it was never his duty to put them back. It was our responsibility to put them back.

Mr. Yoakum: That's all.

The Court: Any other questions?

Mr. Verleger: Nothing further.

The Court: You may step down.

Mr. Verleger: May this witness be excused?

The Court: May he be excused?

Mr. Yoakum: Yes, your Honor. [225]

The Court: You may be excused.

The Witness: Thank you.

(Witness excused.)

Mr. Verleger: Will Mr. Montgomery please take the stand.

JAMES M. MONTGOMERY

called as a witness by and on behalf of the plaintiff, having been first duly sworn, was examined and testified as follows:

The Clerk: Will you be seated and state your name, please.

The Witness: James M. Montgomery.

Direct Examination

By Mr. Verleger:

Q. Mr. Montgomery, will you try to use the microphone and keep your voice up fairly well?
Mr. Montgomery, what is your occupation?

A. Consulting engineer specializing in water works problems, water supply distribution.

Q. For how long a period have you been an engineer?

A. I graduated from Ohio State University in 1920 and have been a practicing engineer since.

Q. Can you give us just a brief resume of your experience? [226]

A. I practiced engineering in Ohio, in the Middle West, until 1938, when I came to Southern California as consultant to the Metropolitan Water District in the design of the water softening plant

(Testimony of James M. Montgomery.)

in La Verne. I established my office in Southern California at that time and have been practicing here ever since.

Q. How large an operation is this office which you have here of which you have charge?

A. Oh, like all engineering offices, it varies somewhat, but at the present time approximately 60 employees.

Q. Can you state for us approximately some of the domestic and public water projects on which you functioned as a consulting expert on planning?

A. We have acted as consultant to such clients as the Metropolitan Water District, the City of Long Beach, City of San Diego, City of Santa Barbara, Ventura, Beverly Hills, Santa Monica, Burbank, Monrovia—I hate to sound like Jack Benny, but Anaheim, Azusa, and Cucamonga.

Q. And a number of others, is that right?

A. Yes.

Q. In the course of your work, is one of the problems you have been concerned with the matter of corrosion in cast iron water pipe?

A. That is true. [227]

Q. This has been true throughout your experience I take it?

A. We have always been concerned with corrosion, and particularly since we have known somewhat the causes of it.

Q. Mr. Montgomery, have you been down by Berth 59 and seen where it is physically situated?

A. Yes, I have.

(Testimony of James M. Montgomery.)

Q. You have been informed, have you not, that there was, on March 12th, a break of a water service pipe which came in from Signal Street, or it passed beneath Berth 59—

Mr. Yoakum: I don't suppose it was intentional, but you referred to the service line. It doesn't distress me, but I want you to keep to what you have said previously.

Mr. Verleger: Counsel, I think the term I have used is accurate.

Q. At any rate, you have seen the location where roughly this pipe failed and you were told there was such a pipe, is that correct?

A. That is true.

Q. You have also heard the testimony that this is an area where the soil is highly corrosive?

A. Yes.

Q. The question I would like to ask you is simply this. Do you have an opinion as an engineer as to whether the cast iron water pipe in question should have been—as [228] an engineering matter, should have been permitted to remain beneath the Berth 59 and the loading dock outside of it from 1914 to 1956?

Mr. Yoakum: That is objected on the ground it calls for a conclusion, no proper foundation has been laid.

The Court: This is an expert. That is the purpose of experts, to give a conclusion.

Mr. Yoakum: I know it, but I don't think

(Testimony of James M. Montgomery.)

proper foundation has been laid. He hasn't shown he has had any familiarity with the pipe, the make of it, the size of it, where it was laid. He just knows there was a pipe that was in the ground for a given number of years.

The Court: Does corrosion in any way depend on the size of the pipe? In other words, will a six-inch pipe corrode faster than an eight-inch pipe?

Mr. Yoakum: I don't know.

The Court: I don't know, either.

Mr. Yoakum: There has been no showing he knows anything about this pipe at all.

The Court: Maybe you'd better lay some foundation.

Mr. Verleger: I will ask him a few questions.

Q. You can assume, in addition to the facts I have stated before, that the pipe in question is an eight-inch sand mold cast iron pipe, the walls were approximately a [229] half inch thick, it led from Signal Street underneath Berth 59, beneath the loading dock and beneath the building itself, to a point just inside the door, where there was a riser and where it led to a lateral which went across the inside of the foundation of the building. Bear in mind this pipe in turn serviced a sprinkler main system inside, and also some fire hoses inside, and no other purposes.

Considering those facts, do you have an opinion as to whether or not the pipe in question should

(Testimony of James M. Montgomery.)

have been permitted to remain in highly corrosive soil from 1914 to March, 1956?

The Court: You can answer yes or no.

The Witness: I think it should have been replaced.

Q. (By Mr. Verleger): Will you state your reasons for your opinion?

A. The reason I think it should have been replaced is that it is in effect the same as a service line. It is a line which brings water into the building for fire protection purposes. It is unlike similar cast iron mains laid under the street where a break in the line would simply cause inconvenience, as a rule, and delays in traffic movement. In a building or a warehouse where goods are subject to damage, I feel just a short length of service pipe should be replaced. It can be done quite economically. Knowing the soil is [230] corrosive, I think it should have been replaced.

Q. Approximately when do you think it should have been replaced?

A. I don't feel they should wait until failure, but should replace it as soon as they know it is in corrosive conditions, because cast iron pipe is particularly vulnerable to this graphitic type of corrosion, and a leak in cast iron pipe always assumes great proportions because the pipe doesn't just leak, it breaks. Usually a piece comes out of it. Therefore, the general flooding takes place.

Q. Is the term hot area sometimes used for

(Testimony of James M. Montgomery.)

areas that are particularly subject to corrosion?

A. That is true.

Q. Used generally in the engineering trade in that context? A. Yes.

Q. Has the area of San Pedro Harbor generally been known in the engineering trade as a hot area for any period of years?

A. Yes. The harbor area in general is known as a hot area. I have acted as consultant to the City of Long Beach, and I know the soils in the Long Beach area are hot, and by reputation I know those in San Pedro are, too.

Q. How long has this knowledge generally existed, approximately? [231]

A. I have known about it in the harbor area since the early forties.

Mr. Verleger: No further questions.

Cross-Examination

By Mr. Yoakum:

Q. What is your degree in engineering?

A. My degree is in chemical engineering.

Q. Are you registered as a chemical engineer in California?

A. Registered both as a chemical engineer and a civil engineer.

Q. In these jobs you specifically enumerated, did you have anything to do with corrosion studies of pipes?

A. Yes, on a number of occasions we have.

Q. Taking them in the order in which you gave

(Testimony of James M. Montgomery.)

them, Mr. Montgomery, did you have anything to do with corrosion of pipes in connection with the Metropolitan Water District consultant work?

A. No, not at all.

Q. You were also consultant to the City of Long Beach? A. Yes.

Q. Did you have anything to do there with corrosion problems?

A. I have been consultant on that a number of times. [232]

Q. Did you specifically learn anything about the corrosion problems at Long Beach?

A. I will have to answer it this way. I learned specifically about the corrosion problems in Long Beach, but most of it through conversation with men with whom I was associated, particularly the corrosion conditions at Belmont Shores.

Q. Is that a separate city or is that a part of Long Beach?

A. That is a part of Long Beach.

Q. Was that what you have termed a hot area down in Belmont Shores? A. Yes.

Q. Have they had pipe in there down there for any long period of time?

A. They had cast iron pipe in there, which I believe I have a notation as to when it was laid. I am not real sure. Pipe was laid in the mid twenties and they had so much trouble from breaks in the pipeline due to graphitic corrosion that they replaced the entire gridwork with asbestos cement pipe.

(Testimony of James M. Montgomery.)

Q. When was that done?

A. When was the replacing done?

Q. Yes.

A. It was done, if I remember correctly, some five or six years ago.

Q. How much pipe did they take up, do you know? [233]

A. No, I don't. It was several thousand feet.

Q. Did you have any experience of a similar nature in your duties at San Diego?

A. Only a familiarity with the troubles in San Diego.

Q. Did they have a hot area, as you describe it?

A. Yes. They have several hot areas.

Q. Were you advised that they took up their pipe?

A. I don't know of them taking up any.

Q. What was your connection with Santa Barbara?

A. In Santa Barbara, our connection was design and supervision of construction of facilities. We had nothing to do with any——

Q. No corrosion problem there? A. No.

Q. What about Beverly Hills?

A. We had no reports at Beverly Hills.

Q. You mentioned Santa Monica. Did you get into any corrosion problems down there?

A. No.

Q. In Burbank, any corrosion? A. No.

Q. What about your three cities, Azusa, Anaheim, and Cucamonga, did they have corrosion?

(Testimony of James M. Montgomery.)

A. No. They are very fortunate. The soils there are not hot at all. Well, Anaheim has some hot soil, it is [234] true, but the other two do not.

Q. Is it correct to state that of these clients that you specifically enumerated, the only one involved in a corrosion problem that you got into at all was Belmont Shores area of Long Beach, is that right?

A. Of those that I mentioned, that is the one that specifically involved corrosion. However, there have been numerous other cities in which corrosion problems were involved.

Q. Where did you have any other clients where you had this so-called hot area trouble?

A. One of the worst is at El Centro, California. Another one that is extremely bad is Las Vegas, Nevada.

Q. Did you advise them to dig up their pipe?

A. Oh, no.

Q. Did they do it and replace it?

A. No. They did at El Centro. It was necessary. The corrosion was so bad there that they had to do it in a number of cases.

Q. Was their pipe that you dealt with down there cast iron pipe?

A. It was cast iron pipe.

Q. Of what vintage, what age?

A. Well, I don't know, and I don't want to convey the impression that I was employed by El Centro to investigate [235] their hot soil problem. I was designing a filtration plant for the city at

(Testimony of James M. Montgomery.)

the time and this problem came up and it was discussed very thoroughly, and I saw many samples of the pipe.

Q. But you had nothing to do with any removal of pipe in El Centro?

A. I had nothing to do with any removal of pipe. We merely had to design our new facilities so that we would not repeat the process.

Q. That was recently, was it?

A. That was right after the close of the war, about 1946.

Q. What did you do up in Las Vegas?

A. We have been engineers for the Las Vegas Valley Water System, Water District System, primarily since it was founded. We had to make an appraisal of the Las Vegas Land and Water Company's system for its purchase by the water district, and in making an appraisal of the system, we had to investigate the condition of the pipe. We found that large areas of the city, that the pipe had suffered so from graphitization that we had to cut down considerably on the expected life of the pipe. We found some very bad experiences with graphitization in Las Vegas, and particularly one main badly graphitized broke in front of the telephone building and caused considerable [236] damage.

Q. Is that the main out in the street?

A. Out in the street.

Q. How long had that main been in, from your examination?

(Testimony of James M. Montgomery.)

A. I believe it had been in since about 1935.

Q. That main caused damage even to the telephone company, though it was in the middle of the street, is that correct? A. Yes.

Q. Do you know of your own knowledge what was done with reference to that Las Vegas situation when that main broke?

A. They replaced enough pipe both ways from the break that it couldn't damage the telephone company the next time that it happened.

Q. But the rest of the pipe they left in, did they? A. That is true.

Q. You thought that was consistent with sound practice to leave it in? A. Yes, with a—

Q. When did you first see Berth 59?

A. Oh, I think it was about 10 days ago, maybe two weeks.

Q. Just at the end of September?

A. Yes. [237]

Q. How much time did you spend down there?

A. Oh, between two and three hours.

Q. Did you go into the berth, Mr. Montgomery?

A. Into the warehouses?

Q. The transit sheds. A. Yes.

Q. Did anybody point out to you where this break had occurred?

A. Pointed out to me where the pipe had been replaced in a new location, and it looked as if a new service had been put in. I am just judging by the way the street looked.

Q. I did not make myself clear. I want to know

(Testimony of James M. Montgomery.)

if anybody pointed out to you the approximate location of where this pipe was when it broke.

A. Yes.

Q. Who pointed it out to you?

A. Mr. Privett, one of the attorneys.

Q. And where was this?

A. It was where the elbow on the cast iron service line bent up to come into the building, where it came under the floor and up into the building.

Q. Was it pointed out to you as being a piece of pipe that was under the ground? A. Yes.

Q. And was it pointed out to you as being a vertical [238] piece of pipe or a horizontal piece of pipe?

A. It was my understanding that it was right at the bend, and I don't know whether it was vertical or horizontal.

Q. When you say it was your understanding that it was right at the bend, do you mean that it was in the elbow, that part of it was the elbow itself?

A. I should say close to the bend. I don't know.

Q. You don't know then whether it was a vertical piece or a horizontal piece?

A. No, I don't.

Q. Do you know how deep—were you told how deep the pipe was at the point where it broke?

A. Yes, I was told, but I don't remember.

Q. Does depth have any bearing upon your opinion about removing this pipe?

(Testimony of James M. Montgomery.)

A. I don't understand your question.

Q. If the pipe were a half inch or six inches under the ground as contrasted to being eight or nine feet under the ground, would those facts have any bearing upon your conclusion as to whether they should be removed?

A. No, I don't think so. I think that wherever it was, and I don't think it was any eight or nine feet below the ground, because we did open up the meter box and see what the depth of the fire service was. It seemed to be out in the street possibly three feet below the ground. Where it came [239] up into the building, I don't know exactly what it was, but I think it was just normal depth for a water service.

Q. Were you told by anybody as to what substance covered that pipe that broke?

A. No. We did some guessing on it. When I was a boy I worked one summer with the Standard Dredging Corporation taking soundings down in the harbor, and it was right in that immediate area, and I was trying to guess whether it was something pumped out of the bottom of the harbor, and we made some assumptions that it probably was, but I don't know.

Q. Were you given any information whether in addition to being covered by earth it was covered by any other substance?

A. No.

Q. If you knew it was covered by concrete floor, would that have any bearing upon your testimony here as to the desirability of removing it?

(Testimony of James M. Montgomery.)

A. I don't believe I understood your previous question correctly.

Q. Well, sir, I want you to understand it. You correct yourself.

A. I do know that there was a solid floor on top of the pipe, but I don't think that that would have any bearing on my recommendation that the pipe should be replaced in order to protect valuable materials in the building. [240]

Q. Is it your opinion that the pipe should be replaced irrespective of the depth that it was in the ground?

A. I think that could be carried to extremes.

Q. Yes. I didn't mean to put it that way, to dig an oil well or anything like that, or the bottom of a mine shaft, but what would you consider to be a depth at which it would be necessary to remove this pipe?

A. I don't think it would ever be laid at any depth that would make it unnecessary to replace it. I think from four to five feet is normal depth for laying such pipe, and that is what it probably would be in this case.

Q. If it was deeper than that, if it was laid deeper than that at the point where it burst, would that have any effect on your opinion?

A. It would have to be an awful lot deeper.

Q. What do you mean by an awful lot?

A. I am not going to say, because I don't think any pipe would ever be laid deep enough but what

(Testimony of James M. Montgomery.)

I think it should be replaced under occasional circumstances.

Q. Did you ever see the pipe that burst?

A. No, unless this is it (indicating).

Q. That is it, but I mean you have never seen it before you came in here? A. No.

Q. You say the reason that this pipe, in your opinion, [241] should have been replaced is because of its proximity to this loading shed. If it were out in the street, if I understood you correctly, you wouldn't recommend it being replaced, is that correct? A. No, I would not.

Q. It is just because it was close to that. Now, then, how far out from the loading shed would you have to go before you would feel you shouldn't have to replace it?

A. I think the principal point, place where damage could occur, would be after it went under the loading dock. From there on out to the main, I don't believe the chance of damage is so great, but after it gets in under the concrete structure, I think that is the pipe that should have been removed.

The Court: May I ask a question?

Mr. Yoakum: Yes.

The Court: In your opinion, whether the pipe should be replaced or not is based on the proposition of whether or not escaping water would cause damage?

The Witness: That is true.

The Court: And if it wouldn't cause damage, you wouldn't replace it?

(Testimony of James M. Montgomery.)

The Witness: No. Just wait until it broke.

The Court: While I am asking you questions, I want to ask another question. I want to ask you this one [242] before I forget it. In all your experience, have you ever recommended that cast iron pipe be replaced before there was any break in the pipe line?

The Witness: Only in the case of water service. I have recommended it in the case of water service going into important structures and buildings, but never in the case of a water main, a main out in the street.

The Court: In the water service, what do you mean by that?

The Witness: I mean the customer's connection to the water main.

The Court: The customer's connection?

The Witness: Yes, where the water comes into a building.

The Court: Is that based on the period of time the pipe has been in the ground?

The Witness: No. It is based more particularly on the soil conditions in which the pipe is laid and the materials of which the pipe is constructed. If the soil is, as we call it, hot, and if the pipe is cast iron, I feel that it should be replaced before there is a possibility of damage. I say cast iron, because cast iron is so brittle, and it is particularly brittle when it becomes graphitized, so you don't just have a leak, you have a deluge. The side of the pipe will give out. [243]

(Testimony of James M. Montgomery.)

The Court: Let's get back to my question. Maybe I haven't stated it correctly. In all your experience, have you recommended cast iron pipe be replaced before there is a breakdown purely on the ground that it was in hot soil?

The Witness: Yes, I have where it is a service line.

The Court: When was that?

The Witness: That is going into a building. That was at Las Vegas.

The Court: That was at Las Vegas?

The Witness: Yes.

The Court: And it was a service line going into a building?

The Witness: Yes.

The Court: Is that the only instance?

The Witness: That is the only instance.

The Court: Well, I notice it's 3:00 o'clock. I have interrupted counsel's line of thought. I think we will take the recess now. We will recess until 10 minutes after 3:00.

(Recess.)

Mr. Yoakum: Your Honor, may I put Mr. Ashline on for one or two questions and maybe we can finish with him?

The Court: All right. [244]

ROBERT R. ASHLINE,

recalled as a witness herein, being heretofore duly sworn, was examined and testified further as follows:

Cross-Examination

(Continued)

By Mr. Yoakum:

Q. Mr. Ashline, I am going to show you a page here out of a book that—what is this book?

A. That is the pipe location reports for December 1933 to August 1934.

Q. Of the City of Los Angeles Water Works?

A. Yes, sir.

Q. Is this one of your permanent original records? A. Yes.

Q. Do you have a sheet in here, filing No. 53,320, foreman's pipe location report?

A. Yes, sir.

Q. On the back of that sheet he has a little sketch of a street called Outer Street, and then extending westerly from Outer Street, what does that little sketch mean?

A. That is a drawing showing the limits of the street and the limits of that particular section of pipe that was laid at the time, the size of the pipe and the length of the pipe.

Q. Does it show anything about replacing or fixing [245] leaks in the pipe on either side of that street?

A. No, it doesn't. This is a new installation.

Q. Does this area that is shown on the back of

(Testimony of Robert R. Ashline.)

that sheet number that I mentioned depict the same area that is shown in Exhibit 28-A and encircled here on Outer Street just north of the West Channel?

A. Yes.

Q. Now what does that report state as to the kind of pipe that was put in there?

A. It states 659 feet of 8-inch cast iron Delbo pipe, class 250, 18-foot lengths.

Q. It was put in in 1934?

A. June 2, 1934.

Q. At that time was Delbo pipe a sand cast pipe or a metal mold?

A. That is a metal mold pipe.

Mr. Yoakum: Now, if your Honor please, if anybody wants it, we will have a copy of that sheet photostated and brought in. If you don't want it, we will let it go.

Mr. Verleger: I don't insist.

The Court: You don't want it?

Mr. Verleger: Not as far as I am concerned.

Mr. Yoakum: Do you have any further questions? That's all I have. [246]

Mr. Verleger: Just a second. No questions, your Honor.

The Court: May this witness be excused now?

Mr. Verleger: As far as I am concerned.

The Court: You may be excused.

(Witness excused.)

The Court: All right, Mr. Montgomery, will you take the stand again, please?

Mr. Yoakum: I am not sure just where I was in my interrogation. If I repeat a little bit, I ask everyone's indulgence.

JAMES M. MONTGOMERY

recalled as a witness herein, having been heretofore duly sworn, was examined and testified further as follows:

Cross-Examination
(Continued)

By Mr. Yoakum:

Q. Mr. Montgomery, you were told that this pipe was under the floor of a loading dock.

A. Was I told?

Q. Yes. A. Yes.

Q. The loading dock was outside of a transit shed, was it? [247] A. Yes.

Q. Did you observe a loading dock?

A. Yes, I did.

Q. And it was landward of the transit shed, wasn't it? A. That's right.

Q. Did you notice the surfacing on it?

A. It was concrete.

Q. I don't suppose you made any attempt to determine the thickness of the concrete, or anything like that, did you?

A. There was a joint between the vertical wall and the floor, which appeared to be some seven or eight inches thick.

Q. The concrete slab? A. Yes.

Q. How wide was this loading dock?

(Testimony of James M. Montgomery.)

A. I would have to guess. Probably 10 feet.

Q. Were you told how close the pipe was to the wall of the transit shed?

A. I was not told. I observed that it was fairly close, very close to the wall.

Q. What do mean by that, when you say fairly close?

A. Oh, probably within eight inches of the wall.

Q. I think you said that you did not know whether it was in an elbow or whether it was a vertical or horizontal [248] piece of pipe.

A. No, I don't know.

Q. Did you make any calculation as to the distance from where that pipe started to go up vertically into the shed and where it went horizontally to the main? A. No.

Q. How much of that pipe would you have cut off and replaced?

The Court: He is just making a guess. He didn't see the pipe. How could he say how much he would cut off or replace? The testimony is the pipe failed in particular spots. How would he know how much he would cut off?

Mr. Yoakum: I don't think he would, but I think we ought to be able to develop that.

The Court: How can he tell? He never looked at the pipe.

Mr. Yoakum: I don't see how he can tell, either, but he says in pipe like this you have got to replace it when it is hot.

(Testimony of James M. Montgomery.)

The Court: But he didn't say anything about cutting it off.

Mr. Yoakum: All right. If those are words that are deemed out of order, I will rephrase the question.

Q. You said that this pipe, if it was in a known hot area, considering where it was, it should have been replaced, [249] is that correct?

A. That is true.

The Court: May I ask a question?

Mr. Yoakum: Yes, your Honor.

The Court: You mean replace in toto?

The Witness: I think my recommendation would be that it be replaced, sir, all the way from the building out to where it connected to the fire main.

The Court: That would be complete replacement?

The Witness: Yes.

By Mr. Yoakum:

Q. How long would that have been? How many feet of pipe would we be talking about?

A. This again is an estimate, but it might be 100 feet.

Q. Did you know how many of these—would you call it a lateral? Would that be a correct term to describe this pipe that comes from the building out to what you call the fire main? Would you call it a lateral or a lead?

A. Our ordinary term for it would be a fire service.

Q. All right, we will call it a fire service lead.

(Testimony of James M. Montgomery.)

Were you advised as to how many of those fire service leads there were on Pier 1?

A. In the area that we were investigating, the three warehouses, I believe there were three separate services. I [250] wouldn't be certain of that, but I believe there were three.

Q. You just assumed that there were two leads into each warehouse. I will get that map and maybe it will be helpful. This map, Mr. Montgomery, has been introduced here in evidence. This is the transit shed at 57, and then I will point to the one at 58. Here is the one at 59. Then there is one at 60. That is to get you oriented. We are looking north up toward the top of this map. Now, then, this map shows that off of the fire main there are two fire service leads going into each of these sheds, so there would be eight of those leads. Do I understand that it would have been your recommendation that all of the leads be removed? A. Yes.

Q. Then if the evidence shows that there were also leads going across to warehouses on the east side of Signal Street, fire leads, you would recommend that those also be removed?

A. I am not prepared to answer on the other side of the street. Out in the street the damage caused by a break would not be great. Here on this side of the street the only part that I looked at, the service is relatively short, and it seemed to me, as long as they should replace part of it, they should just replace all of it. I feel it should be done if they had known from the hot soil that it was in danger

(Testimony of James M. Montgomery.)

of rupture and should have been replaced the short distance [251] out to the main. If it were a real long service, I wouldn't think it was necessary to replace all of it, but in this case it was short and I think it should have been replaced.

Q. When do you estimate, in your opinion, that this replacement should have been made?

A. Obviously before the break, but I would say when they had warning they had hot soil conditions with cast iron pipe in the ground. I have known them to go out in less than 10 years.

Q. What year would you say, if you had been called down there as a consultant, would you have told them to take that pipe out?

A. I think about 1940 to 1945 is about the time everyone was cognizant of the fact that there was hot soil in that area, and at that time the service lines should have been replaced.

Q. You say that that pipe then should have been taken out after it had been in about 30 years?

A. Yes.

Q. Would that hold good with reference to all the pipe in the system that is similarly situated, that is, leads off of the fire lines going into the several warehouses?

A. Yes, I think that is true. [252]

Q. Would that be irrespective of the size of the pipe?

A. I think we would have to know the conditions in each case, but I am assuming they are similar to this. I say they should be replaced.

(Testimony of James M. Montgomery.)

Q. Any size? Would that make any difference?

A. I don't think the size would make any difference.

Q. You feel that it would be sound judgment to replace it even though you had to dig up a concrete floor and the ground into the earth seven or eight feet?

A. Yes, I do. You are going to have to do it eventually, anyway.

Q. And you would have replaced them all at the same time?

A. Or reasonably close together, so as not to interfere with operations.

The Court: Your opinion that replacement is necessary is based entirely on the question of time? You base the replacement of the pipe entirely on the question of time?

The Witness: Yes.

The Court: Not upon the failure of the pipe, but the fact that so much time had elapsed and the soil condition was such the pipe should be replaced?

The Witness: That is true. [253]

Q. (By Mr. Yoakum): Do you know by what process this cast iron pipe was made?

A. It was laid, I believe, in 1940.

Q. About, yes.

A. The only pipe available at that time was sand cast pipe.

Q. Do you know of any instances in your experience where pipes of this characted have been left in the ground for 42 years in hot areas?

(Testimony of James M. Montgomery.)

A. Pipe is quite erratic in its action. I know of cast iron pipe in hot ground that has given no trouble for many years, and yet another short length that will disintegrate or graphitize quite rapidly. For that reason, many times in making repairs to the mains, they will just take out an affected section and replace it with new pipe and get many more years' service from it.

Q. That is the practice, isn't it, generally speaking?

A. That is the general practice in water mains.

Q. You replace it when trouble develops?

A. That's right.

Q. In your experience, what is the longest you know of that cast iron pipe of this character has served, remained in service, particularly in hot areas? [254]

A. I managed a water company at one time many years ago that had cast iron pipe laid in 1852. Some of it was in hot soil. We replaced some of it. We thought it was defective pipe. At that time we did not know about graphitization. We replaced short lengths of it. The bulk of the pipe held up quite a while.

Q. When was it you did that, managed that company, Mr. Montgomery?

A. That was in 1926 and 1930.

Q. At that time you didn't know anything about this graphitic corrosion? A. Yes.

Q. How many years did that pipe last?

(Testimony of James M. Montgomery.)

A. Some of it is still in.

Q. Since 1852? A. Yes.

Q. I don't quite have it clear on this Las Vegas situation. I believe you testified a main in the middle of the street or in the street, in any event, gave way from graphitic corrosion and damaged a telephone company building that was opposite, is that right?

A. Yes. It was under construction.

Q. Did you have charge of the replacement for that project? A. No, I did not. [255]

Q. But you were familiar personally with what happened? A. I was familiar with it, yes.

Q. Do you know what size this main was?

A. I believe it was a 12-inch, I am not certain.

Q. They just replaced enough of that so that the new pipe would extend beyond each side of the telephone building, is that correct?

A. Yes, that's right.

Q. Did they replace anything else?

A. No. That was all they replaced.

Q. Then there was no service main or service line replaced there at all, was there?

A. The service line was not at fault in this case. It was a main in the street.

Q. But was there a service line connected to that main? A. Oh, yes.

Q. Was it of the same pipe, the same type pipe?

A. No. It was steel pipe.

Q. It was a different kind of pipe?

A. Yes.

(Testimony of James M. Montgomery.)

Q. So then there have been no instances where the service lines have been replaced that you know of, have there?

A. Only one place, as I say, that I have recommended, [256] and they didn't.

Q. You recommended it and they didn't?

A. They haven't replaced it yet, but I recommended they do so.

Q. Where was that?

A. That was in Las Vegas.

Q. I think you testified on direct examination that this pipe that is subject to graphitic corrosion finally gives way, it bursts forth, is that right?

A. That is ordinarily what happens. It sometimes eats through in a small spot, but ordinarily the trouble is it just gives way and the whole piece of pipe comes out.

Q. Can you tell us or do you have an opinion from looking at that as to what happened there?

A. No, I don't know.

Mr. Yoakum: Nothing further, your Honor.

Mr. Verleger: Nothing further.

The Court: May this witness be excused?

Mr. Verleger: Certainly, as far as I am concerned.

The Court: You may be excused.

(Witness excused.)

Mr. Verleger: Mr. Brennan, will you please take the stand? [257]

J. F. BRENNAN

called as a witness by and on behalf of the plaintiff, having been first duly sworn, was examined and testified as follows:

The Clerk: Will you state your name, please?

The Witness: J. F. Brennan.

Direct Examination

By Mr. Verleger:

Q. What is your occupation?

A. Mechanical engineer and consultant on depreciation problems.

Q. Will you state your experience and qualifications generally in that field?

A. Graduate of University of Michigan with degree of Bachelor of Science in Mechanical Engineering, and a professional degree, Mechanical Engineer. I am registered under the law of California as a mechanical engineer. I am a member of the American Society of Mechanical Engineers. I have had about 30 years engineering experience, five of which was in construction work, hydrographic survey, and topographical drafting. The remaining 25 years of my experience has been in the field of engineering economics, principally depreciation problems.

Q. By whom have you been employed? [258]

A. I have been employed by the City of Los Angeles, City of San Diego, Los Angeles Gas & Electric Corporation, Southern California Gas Company, the California Railroad Commission, Federal

(Testimony of J. F. Brennan.)

Power Commission, and by a number of smaller companies.

Q. Some of these employments, I take it, have been simply as consultant in these various fields?

A. That is correct.

Q. Who is your employer now, presently?

A. Presently I am employed by the Pacific Gas & Electric Company, San Francisco.

Q. How long have you been employed by them?

A. I have been employed by them since 1941, with the exception of four and a half years during which I was in the Navy, during World War II.

Q. In connection with your various employments in this field of work of yours, have you studied the field of corrosion as regards underground structures, particularly?

A. Yes. For over 20 years in connection with making depreciation studies, I have had a very great interest in corrosion of underground metallic structures. I have made numerous tests of pipe in the field. I have taken numerous soil samples and had them tested in laboratories. I have made any number of field trips to observe the actual conditions of pipe in service where the pipe had been exposed for [259] our inspection, for my inspection. I have some research work and I have published one paper on corrosion.

Q. Do you have any other publications which are generally relative to this particular field?

A. I have published a few papers on depreciation, but I will have to refer to my notes.

(Testimony of J. F. Brennan.)

Q. I don't think we need the particular titles. Just so I am clear, your particular field has been depreciation. Has this been a study of the actual rate at which things physically do deteriorate?

A. That is correct. My studies had for their object the ascertainment of the life and mortality characteristics of pipe, underground. I have analyzed a great deal of data, not only removal of pipe, but also measurements of corrosion, which I have made in the field for the purpose of determining the correlation between corrosion and the extent of pitting of pipe, the corrosivity of soil, and the time of exposure.

Q. Can you tell us whether there is in this field a substantial literature which is generally available to engineers who are generally interested in it?

A. Yes, there is an enormous literature in this field. The first reference I found was a paper delivered before the British Institute of Civil Engineering in London in 1940. They spoke there of phenomenon which they called the metamorphosis of cast iron pipe. The most extensive investigation is [260] reported in the literature conducted by our own National Bureau of Standards at Washington. They have been interested in this subject for 45 years, beginning in 1910. Their publication entitled *Underground Corrosion* appeared just last year. In 1945 they published a book, another book on underground corrosion, which summarizes the investigations which had been made up to that time.

(Testimony of J. F. Brennan.)

For a number of years they published a Journal of Research, Monthly Journal of Research, and in this appeared papers reporting upon the progress that they were making and what they were finding in the field of corrosion of underground structures over the entire United States.

Q. Have your own studies included the field specifically of corrosion in cast iron pipe?

A. Yes.

Q. Does this extensive literature exist with respect to the corrosion underground of cast iron pipe?

A. Yes, there is a great literature.

Q. As a matter of interest, are there available tables which show the behavior for various periods of cast iron pipe in various types of soil?

A. Yes. The National Bureau of Standards in its publications have from time to time given tables in which they have cited figures which can be used in equations to estimate the time in which puncture of pipe would happen. Other [261] tables have appeared in the literature. There is one that I remember by Mr. Alene, a chemist of Los Angeles, in which he attempted to correlate corrosivity of soil with life of pipe. Another investigator, Mr. Young, also a chemist, published tables. I have some material in my notes I could read if you are interested in numerical values of life of pipe.

Q. At any rate, for the moment I take it it is clear that such material does exist. Did this material exist for some time prior to March 12, 1956?

(Testimony of J. F. Brennan.)

A. The tables that I refer to of Alene appeared between 1931 and 1932. I was at one time a member of a technical committee for the Gas Association, and I know that work in that field was going on at the time to try to ascertain the life of pipe in relation to corrosion of soil.

Q. It would be fair to state there has been a steady stream of this literature about which you have testified from 1920 down to the present time, is that right? A. That is correct, yes.

Q. After March 12, 1956, did you come down here and look at Berth 59 and its vicinity?

A. Yes, sir.

Q. Can you give me the approximate date you came down?

A. It was on the 1st of June, 1956.

Q. Can you tell me what you did? [262]

A. Upon arrival in Los Angeles, I went immediately to Pier I, Berth 59, San Pedro, on the 1st of June, 1956. There I saw the consequences of what had been reported to me as failure of an 8-inch cast iron water main. Inside the pier shed at Berth 59 I noticed that there had been collapses in several places of the concrete deck, large holes.

Mr. Yoakum: I think that is immaterial here about some collapse.

The Court: I think that is probably true.

Mr. Yoakum: In June, 1956. We were not litigating then.

The Court: It is probably true about the collapse of the wall.

(Testimony of J. F. Brennan.)

Mr. Verleger: I think I will connect that up in a moment. I don't expect to ask any opinion about the collapse of the floor. I think it will explain how the witness was able to get a soil sample.

The Court: All right, go ahead and connect it up.

Q. (By Mr. Verleger): Will you tell us what you did and what you saw?

A. I saw that the fill under the floor, the earth under the floor had been disturbed considerably. I was told it was by a stream of water and it certainly appeared so.

Mr. Yoakum: I move to strike what the witness was told. [263]

The Court: It may go out, what he was told. Tell us what you did and what you saw.

The Witness: I took soil samples from the soil in the holes at Berth 59 near Door No. 17. I noted the spot numbers on the bulkhead. I think it was spot 71 and 72. I took several pounds of earth in each sample and took three samples from there.

Q. (By Mr. Verleger): You took three samples from beneath the slab at Berth 59, is that right?

A. Yes, sir.

Q. Did you take any samples in the street?

A. Yes. I noticed an excavation in progress on the inboard side of the pier in Signal Street, and I thought it might be illuminating to test that soil, so I took a sample from that excavation in Signal Street. It was about a depth of three or four feet.

All of these samples, including this last one, I

(Testimony of J. F. Brennan.)

packed in waterproof bags, and I put those inside of outer containers which I tied up and initiated with the date and time and place. Those I brought to Los Angeles, packed them in a carton, and sent them to my office in San Francisco. Later I took those to Emeryville to a laboratory for soil test.

Q. In addition, while you were at Los Angeles, did you [264] go to the yard of the Outer Harbor Dock and Wharf and have a look at the piece of pipe involved? A. I did.

Q. When you got back up to Emeryville, did you take the samples of soil and conduct any tests with respect to them? A. Yes.

Q. Will you tell us what you did with respect to them?

A. I made what are called Corfield corrosivity tests. The Corfield test is made by filling a small can with the soil to be tested, and into that can inserting what is called a standard pipe nipple. It is a steel pipe $\frac{3}{4}$ -inch size. The soil is taken from the sample which is to be tested, packed in there, moistened, and then a direct current potential is impressed upon a circuit of which the can forms one side, the soil, the conductor and the pipe and the other conductor. The current is made to flow through this circuit for a period of 24 hours. The pipe corrodes and loses weight in accordance with the corrosivity of the soil. The test is let to run for 24 hours and the loss of weight of that pipe nipple as measured in grams is then designed as

(Testimony of J. F. Brennan.)

the Corfield corrosivity index. I made tests of that kind on these samples.

Q. That is a method, I take it, of ascertaining the corrosivity of the soil within a reasonably short space of [265] time, is that right?

A. That is correct.

Q. Samples of soil that you took out from under the slab of Berth 59, what was the physical appearance of those samples?

A. They were gray to black in color. They consisted of sand, some clay, and adobe mixed, and of course they were wet and lumpy.

Q. Will you state what you found with respect to the corrosivity of these samples when you tested the same?

A. I found the corrosivity index average for the three samples taken from inside Berth 59 to be 6.5.

Q. Is that a high or a low corrosivity?

A. That is a very high corrosivity index. On the Corfield scale that index of 2 to 3 is designated as bad soil, 3 to 4 is designated very bad soil, so an index of 6.5 would mean an extremely corrosive soil.

Q. I think you stated that you saw the particular piece of pipe involved in the Harbor Department's yard. Were you able to identify the type of pipe it was?

A. Yes. I saw several pipe at the yard there.

Mr. Yoakum: May I ask a question on voir dire?

The Court: Yes.

(Testimony of J. F. Brennan.)

Mr. Yoakum: How did you know that the pipe you saw at the yard was the pipe that burst? [266]

The Witness: I am coming to that. I was going to explain that.

The Court: Answer the question. How did you know?

Mr. Yoakum: Just tell me.

The Witness: The pipe that I saw was marked, identified by crayon with a marking Berth 59, and I spoke to Mr. Gad, or the superintendent of the yard, and I asked him where this pipe had come from. He said it came from Berth 59, Pier 1, and it was brought in here in March, 1956.

Q. (By Mr. Verleger): Now, will you state what you observed with respect to that pipe?

A. There were several pieces of pipe and one elbow. It was eight-inch cast iron pipe. In one pipe there was a great hole which I assume was the hole—a hole as big as a man's hand. I observed that the pipe was rusty, the surface had disintegrated to some extent practically over the entire area. I tried to determine what the original wall thickness of the pipe could have been. My measurement, however, was not very successful. I measured about approximately one-half inch, but in the manufacture of these pipes there is a tolerance allowance in thickness so that I did not get a highly precise estimate, but I judge it to be approximately one-half inch thick. [267]

Q. Did you observe anything with respect to the graphitization of the pipe?

(Testimony of J. F. Brennan.)

A. Yes, I did. I borrowed a hammer and chisel from an employee in the yard and I tested the surface of the pipe in many places, and in several places I found it completely graphitized through the entire wall. At other places it was graphitized up to within a sixteenth or an eighth of an inch of the interior surface. There was surface graphitization on many areas. There were some where there was only a light coating of red rust. This I attribute to the fact that the pipe had been laying in the yard for some time before my inspection. One of the characterizations of graphitization is that the black oxides of iron are held in suspension in graphite flakes, and the reason they are black oxides is because not enough air is available, not enough oxygen, where there is a concrete covering over a trench, to permit full oxidization, and when the pipe gets in contact with the air it is further oxidized to a ferric oxide state, something like the appearance of this pipe here.

Q. Do you have an opinion based on your personal study and also on your familiarity with the literature as to the probable life of an eight-inch piece of black iron pipe of the type under Berth 59 which you saw there in the soil, which you analyzed? Do you have an opinion as to how long the probable life of such a piece of pipe is? [268]

A. Yes, I have an opinion.

Q. What is that life?

A. Under the conditions I observed there, having in mind the soil tests that I made and the type of

(Testimony of J. F. Brennan.)

covering over the pipe, the fact that it is cast iron pipe, it is my opinion that one could expect complete graphitization in certain places on this pipe in 25 years.

Q. Will you explain, giving the reasons for your opinion?

A. Yes. I would like to say, first of all, that when I say an expectancy of 25 years, I don't wish to imply there is anything like the very high precision that attaches to an estimate of that kind. The phenomena of corrosion are of a statistical nature. There is a great variance in the effect that one finds in not only the soils but the action of pipe to them. To understand this, perhaps it might be well for me to explain what I mean by graphitization. All corrosion, at least underground corrosion, is of an electrochemical nature. Small galvanic couples when two metals are immersed in a fluid, salt water, or any fluid, any electrolyte, or any fluid that will pass an electric current, little galvanic couples are set up and your current flows between them. One of them is a positive electrode, which is called a cathode, and one of them is a negative electrode called an anode, and current flows from them and it carries with it [269] some of the metal. The metal really goes into solution.

Now, there must be liquid present, water, and a certain amount of oxygen for this process to continue. In the cast iron pipe itself there is, first of all; iron, ordinary iron. Then there are graphite flakes and then there is another substance called

(Testimony of J. F. Brennan.)

cementite, which is a mixture, a compound of iron and carbon. Now, the graphite itself is electro-negative to iron, so when an electrolyte is present, many galvanic couples start to work in there to corrode the iron.

Now, the reason I say these things are of statistical nature is this. We don't know just where water is going to be present. Usually it is near the bottom of the pipe. The corrosion is at times near the bottom of the pipe.

Furthermore, with regard to cast iron pipe, sand cast pipe, there is, as was stated, a small silicate covering which comes about through the manufacture. Usually that is destroyed, that is, broken in handling. It is more usual than not to find it broken. Where it is broken, corrosion tends to concentrate.

It is not necessary that we have two different metals present. Two different spots of the same piece of cast iron can form a galvanic couple by reason of the fact that one of them may have physical properties varying slightly from the other. [270]

So that the life, estimated life of the pipe, can be stated only as a mean between certain bands. In other words, when we make an estimate, we should state with it also what is called a standard deviation, a standard error of the estimate. In my mortality studies on pipe, it has been my observation that the standard deviation of an estimate of this kind is of the order of about three-tenths to four-tenths, and sometimes a half of the mean.

(Testimony of J. F. Brennan.)

Therefore, following the laws of probability, about two-thirds of all failures of cast iron pipe in a corrosive environment such as this would occur between the ages 10 and 35 years with a mean of 25.

Q. Will there be any continuation of this corrosive process after this 35-year period? Is it something that stops or is it something that goes on?

A. Yes. If you subject, say, a thousand samples—again, when I say this is of a statistical nature, I am saying this is what happens in the long run, and this is what we must anticipate—if you took a thousand samples and put them in the same environment, you would ordinarily expect two-thirds of the failures between age 10 and age 35. Beyond age 35 you would expect one-sixth of them to fail.

Q. Now, is the only method of checking to see if such failures have occurred to wait until water appears on the surface? A. No. [271]

Q. Will you explain why or why not?

A. Because of the nature of these phenomena. Cast iron has another property that I would like to talk about before I answer that question, counsel. I spoke of graphite flakes as being one of the constituents of cast iron. These flakes hold the corrosion in place so that the pipe from the surface will—that is, to the eye the pipe will appear to be in very good condition, retain its original shape, even retain the markings of the original pipe, and as an example, this pipe that I saw at the material yard still had markings on it, USCIPF Company, which is United States Cast Iron Pipe and Foundry

(Testimony of J. F. Brennan.)

Company, and gave the date, 1913, when it was cast, and it gave the place where it was cast, Burlington. Burlington is a city in New Jersey where the Cast Iron Pipe and Foundry Company has a foundry.

Now, one may be deluded into thinking that this pipe was good pipe if he just simply gives a casual inspection, but if he takes a hammer and chisel he will soon find out that it is brittle, it has lost weight, lost specific gravity, it can be fractured with a light tap of a hammer, and that the settlement of the earth, seismic disturbances, earthquakes, water hammer, any kind of a shock, will break it. It is definitely a hazard.

So here we have, according to my estimate, a life of 25 years, and the possibility, the probability of one out of [272] six that it would fail before the age of 15. That is a very high chance for a designing engineer to take, I would say.

I don't know whether I have answered your question.

Q. You mentioned a chance of 1 to 6 when the pipe was 15 years old. This pipe, I think, was installed in 1914. The break took place in 1956. By that time how high would the probability of the failure have become?

A. Well, according to my estimate of 25 years, I could determine that. It would take a little calculation, but under a normal probability distribution that could occur, the pipe could last that long, but the probability that it would not would cer-

(Testimony of J. F. Brennan.)

certainly be well over 90 per cent. Nine chances out of ten that it couldn't last that long.

Q. Now, bearing in mind the literature in this field developed, do you have any impression of the time at which a competent engineer should have recognized the failure of this pipe as a probability? By the time I mean the date.

A. Well, there is certainly in the literature enough to serve as a warning to an engineer who knew these particular circumstances that failure of this pipe could be expected by age 15 years, with a probability that no designing engineer would want to assume in a structure. With that knowledge of the literature that has been available for the last 20 years, 25 years, an estimate of 25 years is very optimistic.

Q. Just so I am clear, for the past 20 years there has [273] been literature available from which a competent engineer could make this determination, is that right? What I am getting at is, how long has the literature been available on the subject, rather than how long the pipe lasted?

A. That is difficult to say. As I say, the Bureau of Standards started its investigation in 1910. A lot was said about corrosion of cast iron prior to that, but how much was reported in literature, I don't know. I happened to be working on some technical matters so I was interested in corrosion at the time. I did a lot of reading on it. I think a person who would be interested in it could have known by certainly 1935 that corrosive failure of this line was imminent.

(Testimony of J. F. Brennan.)

Q. I take it it would not be unfair to say the literature has been available since 1945?

A. Long before that.

Mr. Verleger: We have no further questions, your Honor.

The Court: I suppose the cross-examination will be rather extensive?

Mr. Yoakum: There will be some, yes. I don't know that we ought to try to do it today.

The Court: If you can finish by half past 4:00, we will continue.

Mr. Yoakum: I rather doubt it. [274]

The Court: May I inquire from counsel how many more witnesses you will have?

Mr. Verleger: Your Honor, this is our last witness. We have one other man we could call simply on the question of the relationship between Grace Line and Grace Co., Inc. That is covered in our interrogatories, so we don't need to call anybody else.

The Court: I think possibly we better recess rather than try to hurry through this cross-examination. This is an important witness and we don't want you to feel you have been denied full cross-examination because of the running of time.

Mr. Yoakum: Thank you, your Honor.

The Court: Time seems to be an element in this case.

We will take the recess now then. We will recess now until 10:00 o'clock tomorrow morning.

(An adjournment was taken to 10:00 o'clock a.m., Thursday, October 9, 1958.) [275]

October 9, 1958, 10:00 o'Clock A.M.

The Clerk: No. 20624-HW Civil, Grace & Co. (Pacific Coast) vs. the City of Los Angeles, further trial.

Mr. Yoakum: Ready for the defendant.

Mr. Verleger: Ready for the plaintiff, your Honor.

The Court: All right.

Mr. Yoakum: If your Honor please, our witness is not here yet. I guess he was in a partial state of disheville when we called him, but we want to put Mr. Ashline back on to identify the water analysis he made.

The Court: That's all right. You can put him back on.

Mr. Yoakum: He is going to come in, but I will proceed with Mr. Brennan until he comes.

The Court: All right, then you can proceed with Mr. Brennan.

JOSEPH BRENNAN

resumed the stand and testified further as follows:

Cross-Examination

By Mr. Yoakum:

Q. Mr. Brennan, are you familiar with the American Society of Corrosion Engineers?

A. I know there is such a society, yes.

(Testimony of J. F. Brennan.)

Q. Are you a member of that society? [278]

A. No, sir.

Q. Have you ever been? A. No, sir.

Q. Did I understand you correctly to say that you were more or less of a specialist in engineering economics—is that the term you used?

A. Yes, sir.

Q. Just what does that embrace?

A. That encompasses among things, studies of depreciation, the field encompasses those problems in which an engineering decision is to be made as to which plan of construction, maintenance, and operation will in general minimize costs. Since one of the most speculative of the elements in a problem of that kind is the depreciation, that is usually the one which gets the greatest attention.

Among other costs, of course, are the interest on the investment, the depreciation accruals, the taxes, property taxes, income taxes, maintenance and operating costs. The problems of this nature that are referred to me are whether or not it would pay to put leak clamps on a cast iron system of mains or whether it would be more economical to replace them entirely, whether to build a hydro-electric plant or a steam generator plant. Problems of that nature.

Q. Is it fair to say that this science, if you call it that, is not an exact one? [279]

A. No science that has to do with prediction, and essentially those problems are ones of prediction, can be called an exact science. In fact, it is

(Testimony of J. F. Brennan.)

recognized today that all science comes under what I have described as a statistical nature, even the science of mechanics. The classical treatment of mechanics, celestial and terrestrial, by Newton, was a principle of determinism.

Q. Let's not get into that. Then this is not an exact science and is subject to many hypotheses and assumptions, is it not?

A. I couldn't say as to that, no.

Q. Do you consider that there are many probabilities involved in these calculations?

A. There are many probabilities in these, as there are in most scientific and engineering calculations.

Q. Let's not get into the others. Just let's stick to these engineering economics as it applies to depreciation.

A. I want to emphasize that this is not something peculiar to my work.

Q. Is it a field in which there is a wide diversity of opinion?

The Court: You know, I think every field has a wide diversity of opinion. If I get three lawyers together, we have a wide diversity of opinion on pretty near everything. [280]

Mr. Yoakum: I will certainly buy that. But I wondered if everybody agreed with Mr. Brennan here in his opinions that he stated yesterday in reference to these depreciation matters or is there an area of diversity.

The Witness: Yes, there is.

(Testimony of J. F. Brennan.)

Q. (By Mr. Yoakum): When did you work, or were you employed, perhaps is a better term, for the City of Los Angeles?

A. I was employed as a topographical engineer by the Engineering Department of the City of Los Angeles in 1927.

Q. Did that have something to do with map making, or what did you do? A. With what?

Q. With map making, laying out topography or like that, or what did your duties consist of?

A. I took the notes that were brought in by the surveyors, and made the drawings showing the traverses that they had covered, the calculations for traverse closures, and the location of underground structures.

Q. Did this work have to do with underground structures?

A. Principally underground structures.

Q. It didn't have anything to do with making decisions on the type of materials that were to be used, did it? [281] A. No, sir.

Q. In other words, to put it more bluntly, you were drawing plans of some kind, is that what it amounts to? A. That's right.

Q. How long did that last?

A. I was there for one year.

Q. 1927 to 1928, is that about it?

A. As I recall, yes, sir. Not all of my work was in topographic drafting. I took a civil service examination while I was at this place and they pro-

(Testimony of J. F. Brennan.)

moted me to assistant civil engineer, where I had a little design work, principally in storm sewers.

Q. That was concrete materials?

A. Yes, those were principally concrete pipes.

Q. Was that any particular department you worked for then?

A. Yes. I worked for Mr. Armstrong who was—it was under the City Engineer.

Q. The City Engineer's Department?

A. Yes.

Q. Was your next employment with the City of San Diego?

A. No, my next one was with the Los Angeles Gas & Electric Corporation.

Q. What period did that last? [282]

A. I was there approximately three years.

Q. That would be 1928 to 1931? A. 1930.

Q. 1928 to 1930? A. Yes.

Q. What was your position there?

A. My payroll title was assistant valuation engineer.

Q. What was your job or duties?

A. Well, I was assistant to the head of the department. We had at one time about 75 to 80 people who made a complete survey of the company's gas properties, and estimates of accrued depreciation.

Q. In connection with that job, did you figure depreciation on gas mains? A. Yes, sir.

Q. Are gas mains primarily of cast iron?

A. Some cast iron, yes, sir.

(Testimony of J. F. Brennan.)

Q. Were there some in this system that you evaluated? A. Yes, sir.

Q. Or appraised for depreciation purposes?

A. Yes, sir. Let me put it this way. I made depreciation studies. Many of them are in the nature of research, and a great many of them that I made are not in any way entered on the books of the company. They are just for management's information. [283]

Q. Well, was it part of your job to assign remaining life to cast iron pipe?

A. Not at that time, no.

Q. At any time while you were with the Los Angeles Gas & Electric Company, did you have any such job as that?

A. To estimate probable lives, yes, sir.

Q. Were those matters that went into the records of the company? Were they just theoretical studies?

A. They are theoretical studies which derive from the records of the company.

Q. What did your studies indicate as to how long the Los Angeles Gas & Electric Company had gas mains in the ground?

A. How long they had had them?

Q. Yes. A. I don't recall.

Q. Do you have any recollection as to what your conclusions were as to remaining lives on these pipes? A. No, sir.

Q. Do you recall of any that had been in the ground 50 years?

Mr. Verleger: That would be objected to, your

(Testimony of J. F. Brennan.)

Honor, on the ground that the witness has already answered he doesn't recall.

The Court: Overruled. [284]

Q. (By Mr. Yoakum): You may answer. Do you want the question repeated? Can you recall, addressing your mind specifically to it, of any pipes that have been in the ground as long as 50 years at the time you were making your evaluation studies?

A. I don't recall, but it certainly wouldn't surprise me if they had been.

Q. After you left the L. A. Gas & Electric, where did you next go, Mr. Brennan?

A. I next went abroad. I went to Paris and studied at the University of Paris, the Sorbonne.

Q. For how long? A. One year.

Q. Then I take it you returned here around 1932? A. In 1932.

Q. Would that be about right?

A. Yes, 1932.

Q. Where did you go then?

A. I then went with the Southern California Gas Company.

Q. How long were you with them?

A. I was hired for one specific job and I was with them, I think, seven months.

Q. What was the nature of that job?

A. I was engaged to make a reproduction cost new and [285] value determination of their properties.

Q. Reproduction cost new, that is figuring what

(Testimony of J. F. Brennan.)

it would cost to replace brand new certain of these assets that you were studying, right?

A. Yes, sir.

Q. Did that include cast iron pipe?

A. Yes, sir.

Q. What was the other aspect of your duty assignment there? To study the depreciated value?

A. Yes, sir.

Q. Did your work on the job encompass studying life of cast iron pipe that was in the system of the Southern California Gas Company?

A. Yes, sir.

Q. What did you find out as to the length of time that some of their cast iron pipes had been serviced?

A. I don't recall. Let me say that I have made hundreds and hundreds of these studies of this kind in the past, and this is going back 25 years or more, and I can't recall.

Q. Would you be able to say, as you did with respect to the L. A. Gas & Electric, that probably at that time there had been pipe, cast iron pipe in service as long as 50 years?

A. Yes, undoubtedly.

Q. Did you make any recommendations as to whether that pipe should be replaced? [286]

A. No, sir.

Q. Was that any part of your assigned duty?

A. Not at that time, no, sir.

Q. Not with the Southern California Gas Company?

A. No.

(Testimony of J. F. Brennan.)

Q. No part of that job at all?

A. No, sir. My job was to determine the value of the plant for rate litigation purposes.

Q. For rate fixing purposes? A. Yes, sir.

Q. Do you remember with respect to these pipes that had been in for 50 years, did you assign any remaining life value to them?

A. I did, yes. I had to, of course, to determine value. I had to assign average life, mean lives, that is to say, and to ascertain the age, to ascertain the type of mortality, and from all of that to deduce what is the life expectancy of the present pipe. All of those matters are concerned in an estimate of accrued depreciation.

Q. With these pipes that had been in service as long as 50 years, do you recall what remaining life you assigned them?

A. No, I don't, because that would require that I recall the type of dispersion. I tried to explain yesterday that there is dispersion of failures to make a mean life, and [287] this is very important in estimating future life expectancy. It is analogous to the case of a human being. We use the same equations, incidentally, as are used by actuaries in the analysis of human mortality. In an analysis of a large map of these data, we find a marvelous conformity to the mortality characteristics of human beings. As I say, we use the same equations, but different parameters. The type of equation determines the shape of the curve, but the valuation of the constant parameters in those equations are

(Testimony of J. F. Brennan.)

what tells us whether the curve moves over, whether it is flat, or high peak, and so on.

I would have to recall, to answer your question, not only the average, the mean life of those pipes, but also the type of dispersion. As I say, I have run hundreds of these curves, and to recall, to single out one particular one, would be impossible for me without reference to data.

Q. Did you find out in your studies for the gas company that some of their pipes were in soils with high corrosivity indexes or severe corrosivity?

A. Yes, some were.

Q. They had been in there a good many years, had they not?

A. Some of them had, no doubt.

Q. With reference to those that had been in there, say 50 years, do you recall whether you determined that they [288] had no remaining life for your rate purposes?

A. Well, that is a question that embraces a sort of mutually exclusive proposition there. No remaining life. You might say if a man has an expectancy of 65 years, he doesn't drop dead at 65. If he reaches 65, his life expectancy is five years.

Q. You wouldn't throw him away, but on this pipe you talked about at the Harbor yesterday, as I understood your testimony, at the end of 25 years you are going to junk that pipe, aren't you?

A. No, sir. I didn't either express or imply that.

Q. I evidently misunderstood you. We will get to that later.

(Testimony of J. F. Brennan.)

Where did you go after you left the Southern California Gas Company?

A. I went with the City of San Diego.

Q. What was your position there?

A. I have forgotten my exact title.

Q. Well, your duties.

A. My duties were to assist the City of San Diego in preparing an action before the California Railroad Commission in an attempt to show that the rates for service, their gas and electric rates, could reasonably be lowered. I was charged with the duty of determining value of gas plants.

Q. How long were you employed with the City of San [289] Diego, approximately?

A. Well, I was there from—about eight months on the job, and then when the hearings were held in San Diego, I had to come back several times.

Q. You worked there into the year 1933?

A. Into the year 1934.

Q. I thought you left the gas company in 1932 about the fall and then went there.

A. No. I left San Diego in March, I believe, of 1934.

Q. All right, sir. Then you came back to testify when they had the hearing before the Public Utilities Commission, is that right?

A. Yes, sir.

Q. What was your study?

A. To determine the value of gas plants.

Q. The City was seeking to lower their rate, is that what you said?

(Testimony of J. F. Brennan.)

A. Yes. I think the action was instituted on the Commission's own motion and that the City Attorney appeared as an intervenor, I guess you would call it. I worked with the City.

Q. What I am trying to find out is, was the City trying to sustain a gas rate and was it resisting a proposed decree that the Commission was——

A. No. The City wanted the Commission to lower rates. [290]

Q. To lower rates? A. Yes.

Q. In that job, did you make a study of the City's underground piping? A. No, sir.

Q. That job had nothing to do with underground piping? A. The job did, but my duties didn't.

Q. I mean you didn't get into that matter of underground piping in any way on that particular assignment?

A. I will have to withdraw my statement. I got into the matter of underground piping that was located at the gas plants and used in the manufacture of gas, but not in the underground piping in the distribution system of the company.

Q. In connection with that job, did you ascertain the length of time for which their cast iron pipes had been in use?

A. We had some men who went through the company's records, and that information was developed there, but I don't recall anything about it.

Q. Did it come to your attention that they had cast iron pipe in their system for as long as 50

(Testimony of J. F. Brennan.)

years? A. As to that I couldn't say, counsel.

Q. You don't know. After you left there, did you work for the Railroad Commission or the Public Utilities [291] Commission?

A. No. My next employment was with Pacific Gas & Electric Company.

Q. Over what period of time was that, Mr. Brennan? A. 1934 to 1937, three years.

Q. Was your office in San Francisco?

A. Yes, it was in San Francisco.

Q. What was your job assignment there?

A. Well, I was engaged to make a study of depreciation of the company's gas properties. That included all of their underground system, distribution, transmission mains, and—well, the entire property, gas property.

Q. Then this study here did specifically include underground transmission mains for the gas company? A. It did, yes, sir.

Q. Were a considerable portion of those mains of cast iron pipe? A. Yes, sir.

Q. Have you any idea of the number of miles in the system at that time?

A. I did know that figure, but—are you speaking only of cast iron now or total mileage?

Q. Yes, because there is no need of getting into any other kind of pipe, as far as I can see in this case, but cast iron pipe. [292]

A. Yes. We had a considerable amount of cast iron in San Francisco, Oakland, Sacramento, San Jose, Eureka, and others, Salinas—no.

(Testimony of J. F. Brennan.)

Q. What would be the size of that pipe in the mains, somewhere between six and twelve inches?

A. Oh, no. It goes up to 36-inch cast iron.

Q. You did go down, I suppose, to six or eight inches?

A. Oh, yes, sure, four inches, I think, also.

Q. In those areas were severe corrosivity problems encountered?

A. Yes, very severe along the Bay and anywhere near, contiguous to salt water.

Q. Was the purpose of this study for a rate case?

A. This was a case in the Northern Division of the District Court on Appeal from the decision of the Commission. There was a Special Master in Chancery appointed.

Q. But it was in connection with a rate case, is that right? A. Yes, sir.

Q. I assume, unless you tell me differently, that P. G. & E. was trying to have a higher rate sustained? A. I think it was to resist a rate cut.

Q. It was trying to maintain the existing rate as against the Commission's suggestion that it should be reduced? [293] A. Yes, sir.

Q. In the transmission of gas, it is at least as important to have good, safe gas pipes as it is in the case of the transmission of water, is it not?

A. Yes, sir.

Q. As a matter of fact, you consider that gas is a much more dangerous substance if it escapes than water? A. It is.

(Testimony of J. F. Brennan.)

Q. What did you find out about the length of service of the P. G. & E. mains—I will stick to my question that it is cast iron mains now, when you made this study in the middle thirties?

A. We had cast iron mains that had been in service for a very, very long time.

Q. Can you give me just approximately in years? That is a pretty general term, very, very long time.

A. I am trying to recall just what the oldest main was that we had then. I am quite sure some of it dated from the 1890's.

Q. Would that be generally throughout the Bay area? A. Well——

Q. This pipe that dated from the 90's?

A. No, sir.

Q. Where would it be located?

A. It would be located in those areas that were favorable [294] to the survival of cast iron that long.

Q. Is it your testimony that the—of course, I don't imagine that pipe in San Francisco had been in since 1890, in view of the earthquake and fire, but what about the situation in the other Bay areas, such as Alameda and Oakland or Richmond or Emeryville? Was there none of that old pipe in there?

A. There was cast iron pipe in Oakland, and parts of it were quite old.

Q. Back as far as the '90s?

A. I can't say. I recall one instance there. I

(Testimony of J. F. Brennan.)

was trying to find out the oldest piece of pipe in the system at Oakland and I asked a couple men to investigate it. One of them brought me back a little piece of paper and it was an order to install a piece of cast iron main, and it was dated 1866, and it said, "Run 4-inch cast iron main out to Dr. Jones' house."

I asked the men to go out there and see if they could find that pipe and they were not successful. I wanted to investigate that to see what condition it was in, but we couldn't find it. There was no record of its removal.

Q. On this cast iron pipe that had been in service since 1890, did you assign any remaining life to it?

A. Only as a composite in which that was thrown in with a great deal of other pipe.

Q. You probably reached some mean or average figure in [295] your over-all conclusion, but you had to take each separate piece in order to reach this composite, didn't you?

A. No. The way we reached this composite is this. We go back over the records of pipe installed and pipe retired or failed, taken out of service, and for pipe existing at each age we match up the amount that was exposed to risk of retirement at that age, the amount that actually failed at that age, and from those two figures we determined the ratio which is called a mortality ratio for that age. Then we do that for all pipe in service. Of course, naturally, we don't do it, we couldn't afford to do

(Testimony of J. F. Brennan.)

it for each piece of pipe in the system. So we select a representative division. We selected East Bay, which embraces, Oakland, Alameda, and some of those towns that you mentioned.

Having developed those ratios, we then assume an installation, say of a million feet, and applying those ratios successively to that million feet, we reduce it and we get survivors at each age out of the million that we started with. With those survivors we then fit to that data a mortality equation, such as the Gompers equation or the Makin equation, and that is fitted by mechanical means, and it is projected out beyond the range of your experience, you see?

Q. I don't want to be discourteous, but you just completely lost me, because I don't understand those things. [296] But on an old piece of pipe, you had to give it some value or give it no value.

A. The process that I was trying to describe is a necessary step toward reaching that conclusion.

Q. But my question is, did you give the old pipe, this 1890 pipe that had been in service around Alameda, did you give it some remaining life value?

A. Yes.

Q. Can you tell approximately how much life you would give at that time to a pipe that had been in service over 40 years?

A. You speak of a specific piece of pipe. I cannot tell you unless you give me all of the conditions as to its environment in the soil, a soil test, the moisture, the amount of vegetation, which is im-

(Testimony of J. F. Brennan.)

portant in these problems, the age of the pipe and its depth, whether or not there is pavement over it, whether it is on a slope where the drainage is good, whether it is a clean sandy soil that will pass water, and out of which salts have been leached. All of those things are necessary to an estimate of remaining life of a particular piece of pipe.

Q. Don't you take samples and then assume that that sample is typical of the environment of pipe within a given area? Do you understand?

A. I have done some sampling analysis, but not for [297] that purpose.

Q. You said to ascribe a remaining life, you would have to know all the conditions of its environment. Now, you have a certain number of feet of pipe that has been in the soil in Alameda Bay region since 1890. You ascribe——

A. I said, if my recollection serves me right, I think we had some piping there from the '90s, yes.

Q. So you ascribed a remaining life value to that?

A. Not to that particular pipe. We take it as a whole. We develop the average age of all pipe, and then by reference to this mortality curve, we derive a remaining life expectancy.

Q. But you do give some remaining life to this oldest pipe that is in your system?

A. That's right.

Q. You can't tell me what you gave in any given instance, can you?

A. I don't have the information here that would

(Testimony of J. F. Brennan.)

enable me to answer that question numerically. Of course, the determination of accrued depreciation and the life of pipe is usually done for the life of a given area and you hope that all of these statistical variations will average out. But if you come to a specific piece of pipe and ask that question, then I would say that what you should do is make an equation which sets up depth of pitting on the pipe as related [298] to pipe and soil corrosivity, and solve that problem for the wall thickness. That would give you the age value at which the pipe would fail.

Q. After you left the P. G. & E. in 1937, where did you go then?

A. I went with the Federal Power Commission.

Q. How long were you there?

A. I was there three years.

Q. Until about the time of the war?

A. About 1941.

Q. Were you working out here or in the East?

A. I was in California.

Q. Where was your headquarters?

A. The Federal Power Commission Regional Office in San Francisco.

Q. What were your duties there in your position, Mr. Brennan?

A. Could I have the question again?

Q. What was your job working for the Power Commission?

A. My title was Engineer Expert. That was my payroll title. I was assigned to the job of making

(Testimony of J. F. Brennan.)

studies of hydroelectric projects, making engineering reports on feasibility of the project, the efficiency with which it used water, and the reasonableness of the estimated cost or the actual cost, if it was built. [299]

Q. Maybe we can cut that short. That job did not embrace studying of any existing underground cast iron pipe, did it? A. No, sir.

Q. After that did you go with the P. G. & E. again?

A. I returned to the P. G. & E. Company.

Q. And you stayed there until the present with the exception of your war service, is that correct?

A. Yes. I was there from 1941. I was there just long enough to qualify for military leave, and so I had military leave from early 1942 until December, 1946.

Q. There is one note I made here that you at one time worked for the Railroad Commission.

A. That's right. That was in 1925.

Q. That was even before you went to the City of L. A.?

A. Yes, sir.

Q. What was your job with them?

A. My title was Assistant Engineer. I was given sheets of plans, sets of plans for 40 or 50 buildings, and instructed to take off the materials and to estimate the cost and to estimate depreciation.

Q. And did that have anything to do with the underground piping at all?

A. Only such as would be incorporated in the

(Testimony of J. F. Brennan.)

plumbing at various buildings. That would, of course, be cast iron. [300]

Q. Did you stay there until you went with the City of Los Angeles?

A. Yes. With an interim of about five months, I went with the Army Engineer Corps on Hydrographic Survey.

Q. During the war years were you on a technical position assignment?

A. Yes. For one year I was officer in charge of construction, Bureau of Ships Expansions, around the Bay area.

Then I was appointed technical officer in the office of the Inspector of Naval Material. I also had some sea duties in connection with that, testing, and so on, testing of materials at sea.

Q. I gather from that answer that that job had nothing to do with estimating the life of old cast iron pipe.

A. It had to do with the acceptance of a lot of materials, including pipe. I handled 25 to 50 test reports every day on informative materials, including pipe, specifications.

Q. That related to acquisition of new materials, including pipe? A. Yes.

Q. The job didn't relate to an investigation or study of underground existing pipe? That's all I want to know. A. That is correct.

Q. That takes us up to your return to civilian life, and [301] going back to your employment with the P. G. & E., where you have remained ever

(Testimony of J. F. Brennan.)

since as I understand. A. Yes, sir.

Q. What has been your title there at P. G. & E.?

A. Well, I am—let's see. My payroll title is Supervisory Evaluation Engineer.

Q. Supervisory of Evaluation Engineers?

A. Yes.

Q. Will you tell us what your duties have embraced during that 12 years span?

A. Yes. My duties have embraced very largely studies of depreciation. I am in a position now where operating departments refer to me problems for a determination of the choice of alternate plans, and this requires that I make estimates of life of the facilities, and the expected life of the whole facilities and the cost of new versus the cost of the old, so that the management can determine what to do about the problem. I have made hundreds of mortality studies and inspections of plants in the field, including inspections of pipe, underground structures of all kinds. I have a man skilled in the programming of these calculations for the high speed electronic machines, and we run our mortality analyses on those machines.

Q. Does P. G. & E. maintain any substantial amount of water pipe in its system, or is that completely foreign to [302] its business?

A. We have 10 water systems.

Q. How much would you say you have in the way of mileage mains, cast iron?

A. A considerable amount. In nearly every one of our water systems we have cast iron.

(Testimony of J. F. Brennan.)

Q. Where are those systems, Mr. Brennan?

A. They are generally in Northern and Central California, King City, Salinas, Sonora, and a few other small places.

Q. I suppose in those places you encounter corrosivity comparable to what you testified you encountered down here?

A. Only one instance that I have encountered corrosion similar to what I observed here at Berth 59. That was in a case of cast iron pipe, an 8-inch pipe on our Jackson system. It was near the tailings of an old mine. It was kept wet and it failed in about 20 years.

Q. On these other systems you have, including your gas system, where you use cast iron pipe, that is the only instance that you have of corrosivity that is comparable to what you found down here?

A. No. I thought you were referring to our water system.

Q. I did ask you about your water and now I am going to take the gas. [303]

A. We have had numerous instances, too many for me to recall, but I recall a recent one in 1956 over in San Rafael in the tide flats there. I think this was 10-inch cast iron bell and spigot type. It was a gas line. I investigated that failure. It was a graphitic corrosion failure. The soil test was about 3.4 on the Corfield scale. It was installed about 1939, as I recall, and beginning in 1952 we had trouble with it, and by 1956 we had replaced all of it. That was a line, I

(Testimony of J. F. Brennan.)

don't know the total footage of that, but it was fairly long, a thousand feet, something like that.

The Court: May I ask the witness a question?

Mr. Yoakum: Any time.

The Court: In all your experience in replacement of cast iron pipe, do you remember an instance where you replaced cast iron pipe solely on the ground of the passing of time and before there was any breakdown?

The Witness: This case in San Rafael was such a case, yes.

The Court: I thought you said there was a breakdown.

The Witness: There was a partial failure. I mis-spoke there. It did not completely fail.

The Court: I know, but there was at least a beginning of a failure, or a small failure.

The Witness: It was so badly corroded that upon [304] examination they decided it was too hazardous to keep it in service and therefore it was replaced. I think it was replaced before there was a leak.

Of course, when I say failure, your Honor, I would mean that the pipe doesn't necessarily have to be leaking at the time if the pressure in the pipe is such that it would blow through a very deep pit, see, blow through the iron that was left there, I would consider the pipe as having failed. In this San Rafael case the leak did not develop, but the line was replaced.

The Court: Then is it fair to say that the ordi-

(Testimony of J. F. Brennan.)

nary rule is that the pipe is not replaced because of the passing of time until at least there is a beginning of a failure, or something to indicate the pipe is failing?

The Witness: That is true of water systems, your Honor. It has been found that the most economical plan is to—in a water system where the pressure is low and the hazards are not particularly high, to accept the hazard of failure, to accept that risk of damage, because usually those failures are noted by wetting of the adjacent ground, and corrosion can get in there and do the work. However, that is not always true. We had some failures in Salinas, water pipe, cast iron main, and before it was discovered, it had washed out—well, it was discovered by the collapse of the street, so actually the paving collapsed, and one man's front [305] yard was washed out. We filled some fellow's cellar full of water, and we had to get pumps out there. We had an enormous damage bill there.

The Court: But do you know of an instance where you have ever recommended to any of your employees that because the pipe had been in the ground for 20, 30, or 40 years, it should be replaced before there was any indication of failure?

The Witness: In gas pipe, yes, sir.

The Court: In gas pipe, but not in water pipe.

The Witness: Not in water. We accept those hazards usually because it is more economical to pay the resulting damage than to go in. It is very costly these days to dig up pipe and replace it.

(Testimony of J. F. Brennan.)

Then, of course, you are gambling that the fully corroded pipe will continue to conduct water. It may be only a cylinder of carbon in the ground, sometimes just a hole in the ground, through which the back fill has become completely compacted and gas under low pressure, say under the pressure of 10 pounds, might easily be carried through this water, but the least little shock like an earthquake, settlement of the ground, subsidence, and all that, will ruin the pipe.

The Court: I am interested in your statement about payment of damage. Where your pipe breaks, you go in and pay damage as a matter of course?

The Witness: Where some contractor operates in [306] the vicinity, if he takes a piece of equipment and runs it carelessly through our main——

The Court: Well, that's a different story. We are not talking about that. If you have got a water pipe out here that has been used for a long period of time and the water pipe breaks and causes damage, do you go out and pay the damages as a matter of course?

The Witness: Oh, yes, without a question. If it is our pipe and our water.

Mr. Yoakum: Maybe the PUC ought to look into that.

The Court: I beg your pardon?

Mr. Yoakum: Maybe the PUC ought to look into that. Maybe they can lower their rates if they get a better legal department. I do not want to object to

the question, but I think it is way outside his bailiwick of jurisdiction.

The Court: I don't know whether it is way outside, because there is no question that the water escaped and it caused damage. Now, the only theory on which I have been operating is that the plaintiff is entitled to recover is because there was some negligence on the part of the defendant, but according to this witness there doesn't have to be any negligence. If it is their water that injures anything, they go out and pay the damages as a matter of course.

Mr. Verleger: Your Honor, I would like in [307] that connection to make the following statement. It seems to me clear from what the witness has said that it involves an economic decision. It may be cheaper to leave the water in there and take a chance——

Mr. Yoakum: ——I don't think that Mr. Verleger ought to——

Mr. Verleger: Please don't interrupt me.

Mr. Yoakum: I don't want you to make an argument while I am cross-examining.

The Court: Just a minute, Mr. Yoakum. We have a reporter here and he is just as good a reporter as the P. G. & E. or the Gas Company or the City of Los Angeles has in your department, but he can't take more than one of you at a time regardless. So do not interrupt. Allow Mr. Verleger to make his statement. We haven't got a jury here. If it is immaterial, I certainly will disregard it.

Mr. Yoakum: All right. I beg your pardon.

The Court: Well, I notice it's pretty near 11:00 o'clock and I have interrupted, so we will take the morning recess. We will now recess until 10 minutes after 11:00.

(Recess.)

Mr. Yoakum: With the permission of the court and through the courtesy of Mr. Verleger, we are going to ask Mr. Ashline back for just a moment. He seems to be embarrassed because he is comfortably dressed. I will say in [308] mitigation that he is going to leave on a trip.

The Court: Well, I won't look at him. You can proceed.

ROBERT R. ASHLINE

resumed the stand and testified further as follows:

Further Cross-Examination

By Mr. Yoakum:

Q. I will show you this document here that has been marked as L for identification and ask you if this is a part of your records down there, permanent records in your office down on Ducommun.

A. Yes, it is.

Q. This is an analysis of some water that was given to you by whom?

A. By Mr. McArthur of the Harbor Department.

Q. Did you have a man under you in the laboratory named Goldman?

A. Yes, sir.

Q. Did you instruct him to make an analysis?

A. I did.

(Testimony of Robert R. Ashline.)

Q. Did he give you that report?

A. He did.

Q. Will you just explain a little bit, without going into too much detail, just what that purports to say, that [309] document?

A. This is a sample of water submitted to me by Mr. McArthur, and their test sample was taken, labeled "From broken sprinkler main." That is all I had to start with. In the analysis of this water, it has a specific electrical conductance of 1407, which is equivalent to some of the water in the Los Angeles water system.

The sodium content was 243 parts per million, chlorides 224, sulfates 190. Those are all in parts per million.

Mr. Yoakum: I think that's all. Do you have any questions?

Mr. Verleger: Just two questions.

Redirect Examination

By Mr. Verleger:

Q. You say this sample is like some of the water in the L. A. water system. Particularly, is it like the Colorado River water? A. Yes.

Q. It has the characteristics of that water?

A. Yes.

Mr. Verleger: I have one other question while you are on the stand. Could I have this document marked for identification, please? [310]

The Clerk: Plaintiff's 29 for identification.

(Testimony of Robert R. Ashline.)

(The exhibit referred to was marked as Plaintiff's Exhibit No. 29 for identification.)

By Mr. Verleger:

Q. Referring now to Plaintiff's Exhibit 29 for identification, this is the progress report on studies of graphitic corrosion of cast iron that you referred to yesterday in your testimony, is it not?

A. Yes.

Q. That was a report made by you and Mr. Kirkendahl for the Department of Water & Power, City of Los Angeles, in 1941, was it not?

A. That's right.

Mr. Verleger: I would like, if I may, to offer this report in evidence at this time, if the court please.

Mr. Yoakum: To which we object on the ground it is immaterial, and that it is hearsay.

The Court: I think that this water content is immaterial. It doesn't make any difference at all, but you want it in, and so I have no objection. I will overrule the objection. This document may be received in evidence. I don't think it has anything to do with this case, but, however, if you want it in, you are making the record and I will let it in.

Mr. Verleger: Yes. Thank you, your [311] Honor.

The Clerk: Plaintiff's Exhibit 29 in evidence.

(The exhibit referred to was received in evidence and marked as Plaintiff's Exhibit No. 29.)

(Testimony of Robert R. Ashline.)

The Court: I will do the same thing with your exhibits. If you want them in, I will allow them in, even though I think it has nothing to do with the case.

Mr. Yoakum: It may not, your Honor, but sometimes a lawyer is on the horns of a dilemma. You may have to put in more than is really necessary. That may turn out to be the situation. But out of an abundance of precaution, I think we ought to develop it. We are not offering it yet, because we haven't tied it up to the source of water.

Mr. Ashline, I think that is all we have of you.

Mr. Verleger: I am sorry, but I have just one other question.

Q. I take it it is true the Water Department is willing to do work on occasion when requested by the Harbor Department.

A. Will you repeat that?

Q. I judge from this test here that when the Harbor Department asks you to do something for them, you will do it, is that right?

A. We will do it for almost any consumer.

Mr. Verleger: Thank you.

The Witness: To a point. [312]

Mr. Yoakum: Now, is he excused?

Mr. Verleger: As far as I am concerned.

The Court: Yes.

Mr. Yoakum: You better run before they think of something else here.

(Witness excused.)

J. F. BRENNAN

resumed the stand and testified further as follows:

Mr. Yoakum: Your Honor was asking some questions at the recess of this witness. Had you completed?

The Court: Yes, I have concluded. But this raises a very interesting problem here. I have been assuming it would be necessary for me to find that the City or the Harbor Department, or whoever is responsible, was guilty of negligence.

Mr. Yoakum: I believe so.

The Court: Evidently from what this witness says, that is not the issue at all. If the City water escapes and causes damages, you pay off regardless of any fault. If that is the rule, then it isn't necessary for the plaintiff to establish negligence.

Mr. Yoakum: Well, of course, Mr. Brennan, without passing upon his qualifications as an engineering [313] economist, is not a very good lawyer, in my opinion. If you will read the case of Williams that is cited in one of my innumerable briefs in this case—it is a brief filed under date of October 3, 1958, if you will read the Williams case——

The Court: Give me the citation. I want to read it.

Mr. Yoakum: Williams against City of Long Beach, 42 Cal. (2d) 716. Mr. Verleger may distinguish it on the ground it is escaping gas.

The Court: 42 Cal. (2d) what?

Mr. Yoakum: 716. You will see that there is no liability in the absence of negligence on a substance

(Testimony of J. F. Brennan.)

escaping from a municipality or somebody else's pipe.

The Court: Let's assume we have, not a municipality here, but a private corporation, and the water escapes. Is the rule the same?

Mr. Yoakum: In the Williams case, it was a proprietary function being conducted by the defendant, so the rule would be the same. The only distinction I can see that Mr. Verleger can make is that it was gas that escaped instead of water.

The Court: Well, this witness may not be a good lawyer, but he at least tells us what P. G. & E. does, and P. G. & E. is a tough customer sometimes, I understand.

Mr. Yoakum: Well, I can't believe—— [314]

The Court: Well, leave this issue now. I want to read the case and see what happens.

Mr. Yoakum: There are many other cases that hold that a supplier of water whose pipe breaks is not an insurer. It is not a question of an absolute liability, like Rylands against Fletcher, or Green against General Petroleum, where you put an obnoxious or very dangerous substance on your property and it has escaped onto somebody else's property.

Mr. Verleger: I think it is worth noting that Rylands against Fletcher, which counsel is just citing, was a case in which water got away.

Mr. Yoakum: Rylands against Fletcher was not a municipal water line case.

Mr. Verleger: It is a case where water got away!

(Testimony of J. F. Brennan.)

Mr. Yoakum: I don't care to argue with counsel.

The Court: I will read the case.

Mr. Yoakum: You will find that there is no doubt about the absolute requirement to prove negligence.

Cross-Examination

(Continued)

By Mr. Yoakum:

Q. Mr. Brennan, during the court's questioning of you, I thought that you said that if you thought the pipe was weak, you would dig it up and check it. Did I get you correctly? [315]

The Court: He didn't say if he thought. It is not a question of thinking.

Mr. Yoakum: I am not sure I got it correctly. That is the purpose of this question.

Q. You said something about you would dig the pipe up and check it.

A. If in our water system—you are speaking of our water system?

Q. Yes.

A. If in our water system evidence of leakage appears in the street or an owner's property and there is a sufficient quantity there, there is a likelihood that it does come from a—there is a practical certainty that it does come from our pipe, then they dig it up and make a repair.

Q. You don't intend to say that in case water pipes, it has been your experience that they dig them up to look at them in advance of trouble, do you?

A. Generally not.

(Testimony of J. F. Brennan.)

Q. Do you have any instance where they have done that? A. No, sir.

Q. In your position with the P. G. & E. since the war years, have you been used for rate purposes?

A. You mean as a witness?

Q. Yes. A. Yes. [316]

Q. Did you make in connection with those objectives—I suppose you made depreciation studies?

A. Yes, sir.

Q. Is it fair to say that ordinarily a utility when appearing before a rate making body tries to get as large a depreciation as possible?

A. I don't think that would be a fair statement, no.

Q. Would you say that the utilities try ordinarily to have a very small depreciation for the purpose of rate fixing? A. No, sir.

Q. From your experience, what do they try to do with this depreciation when they appear before the PUC or other rate fixing bodies?

A. They attempt equitably to spread the cost of depreciation over the life of the facilities.

Q. Has it been your experience that the utility depreciation testimony has usually been at variance, frequently it varies with that of the PUC staff?

Mr. Verleger: That is objected to as immaterial, if the court please.

The Court: Overruled. Read the question.

(Question read.)

The Witness: There has been controversy, [317] yes.

(Testimony of J. F. Brennan.)

Q. (By Mr. Yoakum): Many times you don't see eye to eye, isn't that true? A. Correct.

Q. And usually the staff of the PUC is contending for a longer life to the asset than the applicant is, isn't that right?

Mr. Verleger: That is objected to as immaterial, if the court please.

The Court: Overruled.

The Witness: There is a tendency on the part of the staff to keep depreciation accruals at a minimum. However, the staff of the Commission has recently espoused a doctrine of depreciation under which the accruals would be substantially greater than what we would be willing to accept.

Q. (By Mr. Yoakum): Isn't it fair to say that in your efforts in connection with rate fixing activities, you have tried to establish a quick write-off so that you could show a larger operating cost for the purpose of sustaining an application for a rate increase? Isn't that fair to say? A. No, sir.

Q. You haven't tried to do that?

A. No, sir, I haven't. [318]

Q. Well, haven't you tried to establish quick write-offs?

A. No, sir. We have done this. We have taken advantage of the 1954 Revenue Act to accelerate depreciation.

Q. I don't mean that, anything that the law gives you expressly in the way of a quick write-off. I just wanted to find out if you weren't trying usually to get a faster write-off than the Commission would allow? A. No, sir.

(Testimony of J. F. Brennan.)

Q. Then what do you mean when you say frequently you are not eye to eye with the staff on depreciation?

A. The staff engineers are, I suppose, commendably zealous in the performance of their function. They like to see our operating costs low. Usually, they have no basic information such as we have. We have volumes and tons of material that have been processed through electronic machines. They can check the basic data, determine the accuracy of our calculations, and once that is done, the conclusion is inevitable that a certain rate for a certain life of a plant, a certain salvage value, a certain subsequent consequent rate of depreciation should be the proper one.

When I say the staff espoused another plan, we advocated a sinking fund plan, 5 per cent. They wanted us to go to a straight line depreciation on the remaining life basis, which would substantially increase our annuities. [319]

Q. It is true, is it not, frequently after you have had a long period of use and you have written a piece of pipe down, just for example, where it has a life expectancy of 20 per cent left, the Commission will review that situation and assign a remaining life longer than that and compel you to take depreciation on that kind of basis, won't they?

A. Yes, but when they determine remaining life, they do it from our analysis. They are the only ones they have.

Q. That may be.

(Testimony of J. F. Brennan.)

A. There may be differences in——

Q. Do you know of any instance where any rate making body has permitted a utility to claim a life of 25 years for water pipe?

Mr. Verleger: That again is immaterial, if the court please.

The Court: Overruled. This is an expert witness and this is cross-examination.

The Witness: Not specifically cast iron pipe. There have been properties in my experience that I have known something about, in which the average life of underground pipe was taken as something like 25 to 30 years, but that may have included bare steel pipe, cast iron, and others.

Q. (By Mr. Yoakum): You don't as far as cast iron is concerned? [320]

A. Not specifically, no, sir.

The Court: May I ask a question? In rate making procedures, would the company be allowed in trying to establish the rate to show that a certain length of pipe of a certain pipe length has been in the ground for 30 years, consequently it is valueless and should be replaced, and charge up the cost of replacing the pipe without showing that the pipe had deteriorated?

The Witness: No, sir.

The Court: Just because of passing of time you couldn't charge off the pipe as valueless, could you?

The Witness: No, sir. The system that we use now is a method under which the cost of pipe is reduced by the magnitude of the depreciation and

(Testimony of J. F. Brennan.)

reserve, and only balance then is accrued in the reserve over the remaining life of the property. The object there is to assure, of course, that no more than the cost is ever charged to the customer.

The Court: Let's assume now, this is for the purpose of an assumption——

The Witness: Yes, sir.

The Court: ——that this pipe down here we are talking about in the Harbor has had a failure, the pipe has been in the ground for 40 years. Now, if it was a private corporation and the corporation was trying to establish certain values for the purpose of fixing rates, would it be possible [321] to contend that the pipeline was valueless and it would have to be replaced solely because of the passing of 40 years and solely because there has been one break?

The Witness: It is possible, yes, sir. That would come about this way. Of course, rate fixing is prospective. We are always dealing in estimates of the future. Now, in a rate case, we show in exhibits the amount of expenditures that we propose to make in the following year for construction, and those expenditures include all of the replacements that the company plans to make.

So that the answer to your question will be yes, if that failure, if that replacement were indicated, that would be in the construction budget. It would go into an exhibit and be presented to the Commission, and we would say, "This is what we are

(Testimony of J. F. Brennan.)

going to do in construction work next year, so that our investment will be correspondingly increased.”

Of course, when the older pipe is taken out, the book cost would be reduced by the cost of that pipe, so that actually the only increment in value of the plant would be the difference between the cost of installing the new and the book cost of the old.

Q. (By Mr. Yoakum): Are you telling the court that if you had a length of pipe, a mile of pipe that was giving the City service, except you had one break in it, that if you told the [322] Commission, “We are going to replace this old pipe because we had one break,” that that expenditure would be permitted?

The Court: You have overlooked one very important part, that is, the pipe was in for 40 years.

Q. (By Mr. Yoakum): And that it had been in use for 40 years?

A. Undoubtedly we would find no objection on the part of the Commission’s engineers.

Q. Do you know of any instance where you ever did that?

A. Well, I pointed out in reply to Judge Westover’s question about this San Rafael incident, I pointed out that that replacement was made prior to any complete failure of the pipe.

Q. That pipe had been in just a short time and had developed several leaks, you had numerous troubles with it, isn’t that right, sir?

A. We had some trouble. I would have to go back to the reports to determine the sequence of

(Testimony of J. F. Brennan.)

events, but here is what happened. It was installed in 1939. It was in a soil that was designated as bad soil, having a Corfield index of over 3. I don't know what first drew their attention, the operating department's attention to it, but they started replacing it in 1952, thinking that they could replace a few lengths of pipe and that the remainder would stand up. But [323] by 1956 they discovered that corrosion had progressed to an extent that it would be economical to replace the entire line.

Q. How did they discover it? Because of additional trouble between 1952 and 1956?

A. Well, when our foremen open up a line, they have a form on which they report the conditions that they observe, and we have laboratory men who go out and take samples of this soil, or measure the resistivity, observe those conditions, and come to a decision as to whether only that piece of pipe should be replaced, or whether we should go down the street another thousand feet. They look at the records, find the dates, find the age of the pipe, and here again it is a matter of probability. You have one puncture, say, in one particular location. It is a matter of spending all that money to take up a thousand feet. It depends upon the probability estimated that this line is severely corroded.

Q. Do you know of your own knowledge that there was just the one leak and then they removed a thousand feet?

A. That has happened in San Francisco. We

(Testimony of J. F. Brennan.)

had a lot of trouble with cast iron there. We have a program of leak-clamping the joints, as they call it, because of the recurring leaks. So in order to try to salvage the investment, it was decided to put leak clamps—a leak clamp is two circuits or pieces of metal that fit over the outside of the pipe. One of them will come up alongside the bell and would be secured [324] there by the bell, and the other side would be a clamp in which the bolts would be cinched up to compress the packing in the joint to prevent leaks.

Of course, every little earthquake disturbance you have causes leaks. We had trouble with this last quake.

Q. Are you talking about joint leaks now?

A. Yes. When those joints, when a street is excavated and those joints are exposed, technicians take soil samples, they tap the joint, they investigate the condition of the pipe, and come to some conclusions as to whether they should go ahead with this leak clamping program, because it is expensive, or whether it would be better to replace the pipe with Transite pipe or steel pipe.

Q. Mr. Brennan, that doesn't have any reference to this graphitic corrosion problem, does it? That relates to the problem of whether they are going to put in a different type of pipe because they have so many leaks at the joints, isn't that what you are telling us now?

A. I didn't understand your question was pointed directly to graphitic corrosion.

(Testimony of J. F. Brennan.)

Q. I want to know an instance of when, without any trouble, you have replaced pipe because of age.

A. We frequently move pipe or replace pipe when it becomes evident that considerable damage may ensue if the pipe is left there. I will give you an instance. Only recently, [325] we had a high pressure gas transmission line on what we considered country property. The town grew up, people moved into that area, and we judged it to be hazardous to keep that high pressure line there, so we dug it up, bought a right-of-way a couple of hundred feet away, and moved the entire line.

Q. That was gas. You didn't do that with water?

A. No, sir.

Mr. Verleger: Your Honor, I want to object to the hypothesis that counsel repeatedly urges if it is intended to correspond to the facts here, that there has been no trouble. I respectfully call attention of the court to the fact that the answers to the interrogatories here show two leaks from this system on adjacent buildings or in the same building, depending on which set of answers you accept as being true. Further, the records of the City show an average unaccounted for flow of water through this system of 100 cubic feet a day, and show the repair of additional leaks.

They also indicate, the answers to the interrogatories do, that leaks at the joints, much like the leaks the witness is referring to, have been shown, so we are not presented in this case with a pipe that was free from trouble or anything like it.

(Testimony of J. F. Brennan.)

Mr. Yoakum: Even though we don't have a jury, I [326] wish counsel would refrain from making these arguments. These arguments are proper in closing, but so far——

The Court: Suppose you go ahead with your questions. There is no need to prolong this any longer.

By Mr. Yoakum:

Q. Getting on to a little different subject, Mr. Brennan, from what shed did you take this earth you testified to taking down at the Harbor?

A. Berth 59.

Q. Was that from some place inside of the berth? A. Yes, sir.

Q. Was there a hole in the floor of the shed?

A. Yes, sir.

Q. How big a hole was it?

A. I didn't measure it, but if my memory serves me right, one hole was approximately eight feet by perhaps six, where the concrete had collapsed, the concrete deck had collapsed.

Q. How deep was it?

A. The fill had been washed from under the floor to a depth of a couple of feet. It varied, of course.

Q. You say—I didn't get the last part of that.

The Court: Read the answer.

(Answer read.) [327]

Q. (By Mr. Yoakum): But roughly about two feet below the floor?

(Testimony of J. F. Brennan.)

A. Two or three feet, perhaps more in places. I didn't measure that.

Q. Well, how deep was it—did you go down and get this earth yourself?

A. I was in the hole and one of the men there, I asked him to dig down as deep as he could and get the sample. He did that.

Q. How deep was it from the top of the floor to where you took out this earth?

A. I would estimate about four feet.

Q. Where inside of the shed would you place this hole? A. Near Door 17.

Q. Do you know the width of that shed?

A. No, not exactly.

Q. Assuming it was 100 feet, how far away would it be from Door 17, this hole?

A. May I refer to my notes on that?

Q. Certainly. Do you mind if I look at them while you refer to them.

The Court: Counsel, you are not going to contend this is not hot soil, are you?

Mr. Yoakum: I am going to argue that this evidence doesn't show that this soil was even there at the time the [328] incident happened.

The Court: But the map has been introduced where this area was indicated as hot.

Mr. Yoakum: That is the plaintiff's term. We didn't use it. We didn't use it. They talk about degrees of corrosivity.

The Court: Are you going to contend it was not a hot area?

(Testimony of J. F. Brennan.)

Mr. Yoakum: I am going to contend that they haven't proved that in this particular place where this pipe was, that it was.

The Court: Are you going to have any witnesses who will come in and tell me this is not a hot area?

Mr. Yoakum: I am going to have witnesses explain the physical conditions that existed underneath that loading dock there or in that general area, to try to explain what the situation as to whether this activity was going on.

The Court: Of course, you know the break didn't occur underneath the building. It occurred out on the platform, underneath the platform.

Mr. Yoakum: Well, that is some distance.

The Court: I suppose it is maybe 50 or 60 feet from where this earth was taken.

Mr. Yoakum: That's right. That is what I want to find out, how far it was. [329]

Q. Can you tell now, Mr. Brennan?

A. Yes, at Berth 59, Door 17, spot 73. That is just inside door, spot 73, my notes say.

Q. Would that mean to you that the minute you got inside the door just a matter of one or two steps, this hole was present?

A. Yes, one or two steps.

Q. I mean a matter of five or six feet you are talking about where this hole was from which the sample was taken?

A. Yes, I think that is a fair estimate.

Q. Did you personally make these Corfield tests?

(Testimony of J. F. Brennan.)

A. I started them. Of course, the Corfield test takes 24 hours to complete.

Q. I know I over simplify it, but I want to see if I understand what happens. You stick a metal rod into a specimen——

A. No, a small piece of pipe. Let me show you (indicating).

Q. What is this, a piece of gas pipe?

A. It is a piece of wrought steel pipe, $\frac{3}{4}$ -inch.

Q. This is not cast iron pipe? A. No, sir.

Q. Why do you use a different type of material in making this test from the type of material that is involved here? [330]

A. Because this is a standardized test. In order to compare measurements, you use the same, exactly the same conditions for each test, including the same type of metal.

Q. You put this hollow pipe, wrought steel——

A. Wrought steel.

Q. ——into this sample, and you attach two currents to it?

A. You attach two wires, one wire to the pipe, and the other one to the can.

Q. Then you don't get these readings until 24 hours later, approximately, is that it?

A. That's right, exactly, and as precisely as the clock will measure it. I want to be careful about using that word precision after what I said about it.

Q. Yes. Were there two samples that you made readings on?

(Testimony of J. F. Brennan.)

A. Three samples from inside the Berth 59.

Q. Would you turn to that record of your notes down there at the Berth? You say here, "Two samples of soil taken from the Berth."

A. Yes.

Q. Did you split that up to make three tests?

A. No, sir. I took another sample. I took three samples in all. This just specifies two, but I took three.

Q. Do you have the results here of those tests, those three [331] samples? A. Yes.

Q. Would you turn to them?

A. (Complying): There is test No. 1.

Q. On test No. 1, what is your rating there?

A. 8.1 grams.

Q. 8.1. Then on test No. 2, you got a rating of 1.9, is that correct?

A. This sample, I invite your attention to this note, this sample contains less than one-half of the quantity. This sample was given to me. I didn't take it. It was less than one-half of the quantity of soil required by the regular test. "Test to be run"—I am reading from my test report—"Test to be run, but results will not be used unless satisfactory way can be found to calculate the probable index in terms of a full can."

Q. Let me reconstruct it, then. Two days after this incident occurred, the attorneys for the plaintiff sent you a sample, didn't they, and you made a test on it on March 14, 1956?

A. Yes, that is when that sample was taken.

(Testimony of J. F. Brennan.)

Q. And you got a very low Corfield rating, didn't you?

A. This is completely invalid. There wasn't sufficient quantity for the test, but I ran it [332] anyway.

Q. You made the test, didn't you?

A. Yes.

Q. And you got this low rating. Now, then, did you advise Mr. Verleger or his office of this low rating?

A. I told him that the sample could not be used.

Q. You told him in effect the rating was so low you couldn't make anything of the sample, didn't you?

A. Yes, I told him the sample was no good and couldn't be used.

Q. You told him that it couldn't be used to——

The Court: Counsel, you are arguing with the Witness. You are trying to get the witness to say something he hasn't said. He has told you two or three times the sample was so small he couldn't use it.

Q. (By Mr. Yoakum:) Why did you make the test on this insufficient sample then?

A. I was curious about it. I thought perhaps I could find in the literature some way by which I could translate this low rating to what would be expected had the can been full, had there been an adequate quantity. But I found no way of doing that that would be acceptable.

Q. Your notes indicate that this sample that

(Testimony of J. F. Brennan.)

you say is unsatisfactory, that was taken from the very area where the pipe gave way, wasn't it? [333]

A. Yes, sir.

Q. Now, then, as a result of this, you came down to Los Angeles, as I understand it? A. Yes.

Q. And then you also have your test No. 3, in which you got a rating of 2.0 on your Corfield factor.

A. This is the soil, you notice here, this is alongside Berth 59, Sample No. 3, from a street excavation outside Berth 59, City of Los Angeles, at pipe depth approximately four feet below the street level opposite Door No. 5 of Berth 59. Sample black. No evidence of seashell fragments.

Seashell fragments had appeared in the soil I sampled inside the pier.

Q. Is this in your handwriting in pencil?

A. Yes. That is all in my handwriting there.

Q. Was there another sample here?

A. Yes, sir. Here is one.

Q. So sample No. 3 was taken out in the street, and I suppose that is a low factor, 2.8?

A. Yes, sir, but that needed correction for voltage. You see, the voltage during the test was not held constant. This test requires the 6-volt DC potential be constant or that the results be translated to an equivalent 6-volt potential. Although I have 2.8, when I converted that to 6-volt basis, it is 2.4. I did that to the other tests, of course.

Q. Actually, it is a little lower? [334]

A. Yes.

(Testimony of J. F. Brennan.)

Q. 2.4? A. Yes.

Q. That is from the street excavation outside of Berth 59? A. Yes.

Q. Then here is test No. 4. Is that taken from the hole inside the shed? A. Yes, sir.

Q. And that showed——

A. This was taken 10 feet——

Q. It looks like 10.6.

A. ——10.6 feet from the place where the first sample was taken.

Q. But all in the same hole?

A. Yes. This is the first one here inside the hole.

Q. Inside the shed, you only went into one hole, didn't you? A. No, I went into two holes.

Q. And that gave us 6.5. Now sample No. 5, was that taken in the hole inside the shed?

A. Yes, sir.

Q. And that gave us 7.5? A. 7.5.

Q. That is the end of it? [335]

A. That's all, yes, sir.

Q. Now, then, which ones did you use in arriving at this average that you gave us? Let's refer to them by number. No. 1 is 8.1?

A. Yes. No. 4 is 6.5. No. 5 is 7.5.

Q. How did you then come up with a 6.5 average? That was your testimony yesterday.

A. This would average higher than 6.5.

Q. Yes, that is obvious.

A. The voltage, however, the average voltage was over six volts, so I had to reduce those indices to

(Testimony of J. F. Brennan.)

an equivalent at six volts. When I did that, the average turned out to be 6.5.

Q. You only show this adjustment for voltage on this test No. 3?

A. I did it on another sheet of paper. I transcribed the results..

Mr. Yoakum: I think we ought to have these sheets in evidence, your Honor. Maybe you can make copies of them at the recess, Mr. Verleger.

Mr. Verleger: I have no objection to the sheets going in evidence unless Mr. Brennan has.

Mr. Yoakum: He may want to keep them.

Mr. Verleger: Do you have any reason, Mr. Brennan, why you need to keep those particular sheets? [336]

The Witness: If I had a photostat, it would be all right.

The Court: They may be received in evidence. At the end of the trial, they can be returned to the witness.

Mr. Verleger: All right.

The Witness: May I ask, counsel, you want only the tests I used in coming to my conclusion as to the 6.5?

Mr. Yoakum: No, sir. I want all five tests. You made five tests.

The Witness: Very well.

Mr. Verleger: Do you want to take them out of the book, Mr. Brennan?

The Witness: Certainly.

The Clerk: Exhibit M in evidence.

(The exhibit referred to was received in evidence and marked as Defendant's Exhibit M.)

The Court: Now, counsel, it's 12:00 o'clock. You have probably completed this line of questions about these tests.

Mr. Yoakum: I have a few more on the tests. I am perfectly willing to adjourn at this time.

Mr. Verleger: Your Honor, I have a couple of questions. The witness had tentatively planned to catch an airplane at 3:00 o'clock today. I wonder how much longer does counsel expect to be. [337]

Mr. Yoakum: I would say—I have great difficulty in estimating—but I would say a half hour easily. That is on the conservative side.

Mr. Verleger: Then I think we'd better make our arrangements accordingly.

The Court: Court will stand in recess until 2:00 o'clock this afternoon.

(Thereupon, an adjournment was taken to 2:00 o'clock p.m.) [338]

Thursday, October 9, 1958—2:00 P.M.

The Court: All right, you can go ahead.

J. F. BRENNAN

resumed the stand and testified further as follows:

Cross-Examination (Continued)

By Mr. Yoakum:

Q. Mr. Brennan, having in mind that you testified that your Corfield samples showed an average—was it 5.6? A. 6.5.

(Testimony of J. F. Brennan.)

Q. 6.5 for those three samples taken inside, from dirt inside the shed, would you have the court understand that a sample taken right at the point where the pipe burst would necessarily be close to that figure?

A. I think that is a fair assumption, yes, sir.

Q. The explanation of why the one that was taken right at the point of the break was so low is because there was a small amount of earth, is that correct, and you have 1.9?

A. It wasn't sufficient to give an adequate test.

The Court: You know, it seems to me the witness has said that a half dozen times. I got it the first time.

Q. (By Mr. Yoakum): With reference to the sample that you took out in the street and got a 2.8 reading, why would you say that [339] would be less indicative of the condition underneath the loading dock where the pipe burst than the 6.5 reading that you took from inside the shed?

A. It is farther away. It was a different type of soil. It had no seashell fragments in it, as do the others, indicating possibly the presence of chloride.

Q. How much farther away was it?

A. I think you can ascertain that by comparing the location which I cite on the test sheet with the drawing, which is an exhibit on the board here.

Q. I want to clear up your testimony with reference to the pipe that you examined down at the yard. Remember you went down to the yard that day?

A. Yes, sir.

(Testimony of J. F. Brennan.)

Q. You identify the pipe that you examined as being these pieces now before you?

A. You say can I identify them?

Q. Yes. A. No, sir.

Q. Did they have those writings on them, the paint numbers?

A. I don't recognize that, no. My notes show the number that appeared at the yard was written in a crayon. That apparently is paint.

Q. Is it your testimony then that you do not think that [340] the pipe that is here as an exhibit before you is the same pipe as that which you examined?

The Court: He didn't say that, now. He said he couldn't identify it. He didn't say he didn't think it was the same.

Mr. Yoakum: I am trying to get him to say what he does think about it. I don't know what his testimony is.

The Court: He says he can't identify that pipe.

Q. (By Mr. Yoakum): Would you say that that was the pipe or was not?

A. I don't know.

Q. Did you say that you could tell by looking at the pipe that you saw that it was corroded?

A. Yes, to this extent. Simply by looking at it, I saw a red color, the color of red rust, and I knew at least there was a surface film of red rust on it. I could not tell anything about the graphitization.

Q. You couldn't tell from the surface whether there was graphitization, by looking at the surface?

(Testimony of J. F. Brennan.)

A. I could not.

Q. I suppose pipe that sets out at the seashore area will acquire a red rust, will it?

A. If it is out in the air with a sufficient supply of oxygen, yes.

Q. Did that red rust you saw on the pipe in your opinion [341] have anything at all to do with its giving way?

A. No. I think the rust that I saw was rust that developed on the pipe between the date it was taken out of the location where it failed and the date I saw it.

Q. Did you make any tests on the pipe that you looked at in the yard? A. Yes.

Q. What did you do?

A. I took a hammer and chisel and chiseled various points in the pipe.

Q. You found graphitization? A. Yes.

Q. Did you find any sections that were good?

A. Yes, sir, good to the extent that they were not completely graphitized. One or two spots were coated with a coating of red rust, and under the red rust was found metal.

Q. You were describing this little process that is set up when graphitization starts to working. You mentioned two terms, I think, anode and cathode. A. Yes, sir.

Q. One is positive, is it? A. Yes.

Q. And the other is negative? A. Yes.

Q. Which is which? [342]

A. The anode is the negative.

(Testimony of J. F. Brennan.)

Q. And the cathode is the positive?

A. Yes.

Q. I probably misunderstood you, but I have a note here you said the pipe you looked at showed surface graphitization.

A. In parts it did.

Q. What does that mean, surface graphitization, what does that mean?

A. That means that it was graphitized from the outer surface.

Q. You don't mean that you can see that by looking at the outside of the pipe?

A. No. I said I tested it with a hammer and chisel.

Q. What was your testimony with reference to this 25-year life that you testified to yesterday? I asked you earlier this morning if you had said that after 25 years the pipe should be taken out and discarded, and I think you said this morning no, that that was not your testimony.

A. No, that was not my testimony.

Q. I want to get it clear, please. What is the testimony about this 25-year situation?

A. I said that under the conditions that existed here at Berth 59, Pier 1, it was my opinion that the expectancy from the time of installation to complete graphitization in places, the spots on this pipe, would be 25 years. [343]

Q. Is there any difference in the life of pipe, cast iron pipe, that is in a similar environment, dependent upon the inside diameter of that pipe; for

(Testimony of J. F. Brennan.)

example, will a 10-inch pipe have a longer life than a 4-inch pipe?

A. No, sir, because the thickness of the wall of a 40-inch pipe is less than a 10-inch pipe, and it would take longer for it to graphitize to completion. However, I don't wish to say no to the first question of yours.

Q. I guess I stated two questions. In a given environment, in an identical environment, would a 4-inch cast iron pipe graphitize sooner than a 12-inch pipe?

A. Under the supposition of a corrosive environment, such as this, graphitization process would begin and proceed roughly at the same rate for both pipes, but since the 4-inch pipe has a lower wall thickness, a thinner wall, one would expect it would be completely graphitized before the 10-inch pipe.

Q. So you might expect the larger pipe to last longer before it would give out?

A. That is correct. Now, there is implied in your question something that goes to the theoretical considerations of the development of corrosion, namely, that there is again another and a different statistical relationship here. If you examine a piece of pipe and find that it is pitted, corroded, either graphitized or corroded, steel pipe, you may [344] measure four or five different places where it is corroded and find that the corrosion is 50 mils, 50/1000 of an inch, for example, as the average.

Now, if you examine a greater length of pipe, it is likely that you will find a deeper pit. In other words,

(Testimony of J. F. Brennan.)

there is a statistical relationship between the area that you examine and the depth of the deepest pit. If you want to go far enough, according to the relations established by technicians who investigated this subject, there is an area relationship there. I don't want my answer to imply that I think that the size makes no difference. The size of the area examined, of course, could be related both to the diameter and the length that you look at.

Q. Do you know whether the Internal Revenue Service of the Federal Government has depreciation figures on cast iron pipe?

A. They publish a Bulletin F, which is published for the information of taxpayers who have no other information of their own.

Q. The government will accept the bulletin, won't it, for depreciation?

A. The government may accept it, but many taxpayers won't.

Q. They think it should be longer, is that right?

The Court: How about the engineers? The taxpayer [345] may not accept it, but how about the engineers?

The Witness: Your Honor, this Bulletin F was prepared to assist taxpayers——

Mr. Verleger: Your Honor, I have to object to the witness volunteering.

The Court: Well, I asked the witness the question.

Mr. Verleger: I am sorry. I didn't realize that, your Honor.

(Testimony of J. F. Brennan.)

Mr. Yoakum: Will you mark this for identification?

The Clerk: Defendants' Exhibit N for identification.

(Exhibit was marked Defendants' Exhibit N for identification.)

Q. (By Mr. Yoakum): I refer you to an excerpt from Bulletin F and ask you to identify that as being the one with reference to water transmission systems.

Mr. Verleger: I am going to object.

The Court: There is no question. You can't object until there is a question.

Mr. Verleger: True enough, your Honor. I was anticipating something.

The Witness: Yes.

Mr. Verleger: I thought there wasn't a question,

Mr. Yoakum: There was a question.

The Court: There is a question then. [346]

Mr. Verleger: I would object to the witness identifying a portion of the Internal Revenue Code.

The Court: Overruled.

Q. (By Mr. Yoakum): That is with reference to water, isn't it?

A. Pardon me. I want to get the pending question. Would you read it, Mr. Reporter.

(Question read.)

The Witness: This is entitled "Bulletin F, Water Supply."

Q. (By Mr. Yoakum): Yes, and then what does

(Testimony of J. F. Brennan.)

it say after life of typical plant? It says the average use or life in years, and it talks about——

Mr. Verleger: Is this an argument of counsel or a question?

Mr. Yoakum: This is a question. Why don't you let me finish my question?

Q. You see, here it says cast iron water mains in different sizes. A. It says mains, cast iron.

Q. And the different sizes? A. Yes, sir.

Q. Do you or do you not identify this as a Bulletin F of the Internal Revenue Service relating to water supply [347] systems?

A. I can only identify it by what markings are on it. It says Bulletin F. If you say it is from the Internal Revenue Service, I suppose we can accept that.

Mr. Yoakum: We think, your Honor, this is a matter that you can take judicial notice of, just like a report in a law book, but for convenience we took out a Bulletin F page relating to water line depreciation.

The Court: Do you want it admitted in evidence?

Mr. Yoakum: Yes, we offer it.

Mr. Verleger: I am going to have to object, your Honor, on the ground that it is immaterial, irrelevant and incompetent, and on the further ground that the figure for the life of a 6-inch water pipe under any and all conditions would hardly be material for the life of one in a highly corrosive environment, which is the testimony that we have here.

The Court: Overruled. It may be admitted.

(Testimony of J. F. Brennan.)

The Clerk: Exhibit N in evidence.

(The document heretofore marked Defendants' Exhibit N was received in evidence.)

Q. (By Mr. Yoakum): Are you familiar with an organization known as the Cast Iron Pipe Research Association?

A. I know of the existence of that organization.

Q. Do you know what its function is? [348]

A. I presume to promote and develop research in cast iron uses and technology.

Q. I want to show you a——

Mr. Verleger: Pardon me, counsel. Can I see it first?

Mr. Yoakum: Pardon me. Certainly.

(Handing document to Mr. Verleger.)

Mr. Verleger: Is this an advertisement in News-week here?

Mr. Yoakum: This is U. S. News & World Report.

Mr. Verleger: Your Honor, I would object——

The Court: Just a minute. I can't possibly rule upon an objection unless I know what the question is going to be.

Mr. Verleger: I am sorry, your Honor.

Q. (By Mr. Yoakum): This ad here of the Cast Iron Research Association talks about the age of water and gas mains throughout America, cast iron water and gas mains, 100 and more years old are still serving. Do you agree that is a correct statement of the situation? A. I don't know.

(Testimony of J. F. Brennan.)

Q. You don't know about that. You haven't in your studies studied their research?

Mr. Verleger: I am not sure what counsel's statement was referring to when he said was something a correct [349] statement. Of what situation.

Mr. Yoakum: He understood it. He answered.

Mr. Verleger: Is your question, is there cast iron pipe somewhere which has lasted 150 years, or what?

The Court: Just don't argue between yourselves. If you have an objection, make the objection. If you don't have an objection, don't argue about it.

Is there a pending question?

Mr. Yoakum: I think so, and I have forgotten it.

The Court: Maybe you better start all over again. May I ask a question of the witness since we have interrupted?

Mr. Yoakum: Certainly.

The Court: Do you know of any cast iron pipe which has been in service for 100 years or more?

The Witness: They say the cast iron pipe in the fountains of Versailles in France are much older than that.

Q. (By Mr. Yoakum): Did you make any study in connection with your work on this case of any other corrosion failures in the harbor area?

A. I have some knowledge of corrosive—

The Court: Just a minute. If I understood the question correctly, it was in connection with this case?

Mr. Yoakum: Yes. [350]

(Testimony of J. F. Brennan.)

The Court: In connection with this case, did you make any other study?

The Witness: No, sir.

Q. (By Mr. Yoakum): Are you at all familiar, Mr. Brennan, with the history of the 10-inch water line that starts here at the short end of Pier 1, that is the pier where you took your samples, and runs generally in a northwesterly direction up Signal Street for some five thousand feet? Are you familiar with that pipe in any way?

A. Only from what I have heard here in the court room.

Q. Assume that that pipe was installed in 1914, and that there had been no corrosion failure in that pipe up to 1956, how do you explain that situation and reconcile it with your testimony that this pipe here in question should be considered unsafe after 25 years?

The Court: Counsel, I don't believe the witness said that.

Mr. Yoakum: All right, your Honor.

The Court: The witness said ordinarily, as an average. He didn't say this particular pipe. He says ordinarily. He didn't say this particular pipe should have been replaced in 25 years.

Q. (By Mr. Yoakum): Was your testimony about the 25-year period intended [351] to cover this subject pipe?

A. I stated, I thought, under these conditions that the expectancy, the average life, that is, that a pipe is installed new, and the average life of a cast

(Testimony of J. F. Brennan.)

iron 8-inch main installed in a very highly corrosive environment, such as this was, would in my opinion be 25 years.

Q. Then I think it is fair to say the answer was intended to refer to this particular pipe. I want you to then explain how you reconcile your appraisal of 25 years with the fact that a pipe in the immediate vicinity there over a mile long has lasted for 42 years without a corrosion break.

A. I would explain it this way. The soil——

Q. The what?

A. According to the soil, according to my test out in the street, it is very much less corrosive than the soil under Pier 1, Berth 59.

Secondly, I think probably the drainage conditions are better, favorable to longer life of the pipe.

Q. Where in this area does the soil condition in your opinion change from what you found in the street, this low Corfield reading, to which you found inside the shed? Where is that division line?

A. I don't know precisely.

Q. You think there is down there some very narrow division line between those two soils? [352]

A. Well, I suspect that the presence of sea shells in the one and not in the other would indicate that they are of different origin.

Q. Now, then, assume that you were consultant for the Water Department and that you had been asked in 1939, after that 10-inch pipe had been in there for 25 years without a corrosion leak, if it

(Testimony of J. F. Brennan.)

should be replaced. What would your recommendation be?

A. I would first of all ask for soil tests. I would want to make an inspection of the pipe itself before I drew that conclusion.

Q. Supposing you had done that and you found that the Corfield reading was the same as you had on your sample that you took from Signal Street, 2.8.

A. Supposing it was 2.8 and I found no graphitization on the surface of the pipe, or failure, penetration of maybe 20 to 30 mils, I would say no, don't replace it.

Q. What if they had asked you about the leads coming off of this fire main, one of which is involved in this suit here? If you had known that had been in 25 years, in 1939 what would your advice be?

A. There again I would ask for a test on the soil and I would want to take a look at the pipe. I would form my judgment then.

Q. Would you rely, in forming a judgment, on the test [353] from soil taken inside, underneath the inside of the transit shed, or would you take it in the area where the pipe was located?

A. I would want it in both places, because the pipe extends through the wall.

Q. With reference to the pipe that was running horizontally in the ground, not coming up inside the building, you would want a reading from out there in the earth where it was lying, wouldn't you?

A. Yes.

(Testimony of J. F. Brennan.)

Q. Now, then, if you found it had a high rating in 1939, would it have been your recommendation that that pipe be taken out?

A. I would want to know what the condition of the pipe surface was first.

Q. Let's assume that the condition of the pipe surface—you would have to dig down to it, wouldn't you?

A. Yes, sir.

Q. Would you want to see the pipe around the entire diameter or just on the top surface?

A. I would be content with the upper half of the parameter.

Q. So you would want to dig down and expose half of the pipe?

A. Yes. [354]

Q. And for what distance?

A. Oh, two feet.

Q. Two feet longitudinal along the pipe?

A. Yes, a hole big enough for a man to get into.

Q. This pipe here, if you looked at that just in the manner you have described, exposing the upper half, you wouldn't see any tip-off signs, would you, that any deterioration was taking place?

A. Well, I could see it is rusting, but that's all.

Q. You don't know whether that rust occurred when it was in the ground or after it was taken out, do you?

A. No, but you asked me about this particular pipe, and I say I can see that.

Q. Oh, yes, but I meant, Mr. Brennan, in this hypothetical case in 1939, after it had been in 25 years.

A. Yes.

(Testimony of J. F. Brennan.)

Q. You are going to dig down there before any chance of oxidization sets in, you are going to take a look at that. Now, you wouldn't see, if it is in the same shape it is in now, except for the surface rust, you wouldn't see any sign of deterioration on the exterior of the pipe?

A. Well, if I examined that pipe, I wouldn't simply look at it. I would take a wire brush and clear the dirt off, and I would be very careful about that, because sometimes you brush away the surface of cast iron pipe, and hence you brush [355] it with a wire brush. Then I would take a hammer and chisel and I would test it at various points, and if I found graphitization, I would dig into that and find how deep it penetrated.

Then I would measure it with a micrometer, the depth of the penetration. I would do that in several places on the pipe.

That, together with the conditions I encountered as to moisture and soil index, the depth of corrosion I found here, with that I would then be enabled to form a judgment, but a judgment only as to probable expectancy of that pipe.

Q. Now, assuming that you opened up that hole there, you will have to dig down through the concrete floor of that shed, of the loading platform.

A. Of what?

Q. Pardon me. This pipe was under the loading dock landward of the transit shed. You have that in mind.

A. Just so we don't have a—I always think of a

(Testimony of J. F. Brennan.)

dock as a body of water. You mean the platform there?

Q. Yes. It is the loading platform on the landward side of the shed. A. Yes.

Q. It doesn't have any cover over it?

A. Yes.

Q. It was underneath there that his pipe burst. Now, [356] you dig a hole through that concrete floor and you would go down there to where that pipe was laid, is that right?

A. That's right.

Q. And you would expose it for two feet, and you would take these tappings and you would take your Corfield test, and let's say that the Corfield test came up with 6.5. A. Yes, sir.

Q. Now, then, would you recommend that that pipe be removed?

A. Considering the fact that it serves a—first of all, I am going to ask you what assumption you made as to the depth of corrosion that I found.

Q. I can't make an assumption as to that, because I have no idea what it was at that time. You see what it is now.

A. Well, then I will make an assumption to answer your question. If I found that the pipe was corroded to a depth of 2/10 of an inch, for example, at that time, and I found the soil condition such as you describe, seeing the moisture content, supposing the soil was quite moist at that depth, yes, I would recommend it be replaced.

Q. How much of it?

(Testimony of J. F. Brennan.)

A. I would ask that every one of those leads be examined if I were doing this, for this reason. That failure in there, if the pipe is graphitized and an earthquake comes [357] along, it is quite likely that the pipe will break.

Also, in an earthquake, it is quite likely you are going to have fires, you will have them then, so your fire line is out under those conditions, your pipe is broken, and it is a very serious condition, for which I wouldn't want to assume the responsibility.

Q. You would have every lead checked there on that Pier 1 area then?

A. Every one of those taps from the 10-inch leading into the pier, into the inside of that pier.

Q. This wasn't a tap from the 10-inch we are talking about. That isn't what broke here. These are leads off an 8-inch fire main.

A. All right.

Q. There are two of them going into each berth.

A. All right. Each one of those, then, I would have examined. I would have the floor taken up, broken through, and having encountered that condition in one place, I would certainly feel derelict in my duty if I were charged with that responsibility if I did not have the workmen uncover the rest of that pipe and examine it very carefully.

Q. All right. With reference to this one that you found, first, what would you decide to do about that? Would you take the whole thing out, that whole lead?

The Court: You know, counsel, I think that you are [358] speculating as to what you would do, what

(Testimony of J. F. Brennan.)

the witness would do. The question is not what he would do. The question is what was done. There is no question that this pipe failed. If any engineer had gone down there and made an inspection and saw indications of failure, he would probably have it replaced. There is no question about that. I don't know what you are getting at. You are speculating about what would happen under certain circumstances.

Mr. Yoakum: He said he would take it out in 1939.

The Court: If he found it deteriorated.

Mr. Yoakum: With respect to him, I think it is just historically a ridiculous statement to make, to think that he would take that pipe out in 1939.

The Court: That is up to the court to decide, whether it is ridiculous or not. You might think it is ridiculous and I might not.

Mr. Yoakum: I think I ought to be able to develop the record.

The Court: I think you are going round and round and round, speculating over something which really has nothing to do with this case.

Mr. Yoakum: All right. I will defer that. You told me yesterday you thought there would be considerable cross-examination of this witness.

The Court: You have been cross-examining this [359] witness since 10:00 o'clock this morning.

Mr. Yoakum: I will defer on that subject matter.

Q. When you saw this pipe, you could see its markings, couldn't you, down there at the yard?

(Testimony of J. F. Brennan.)

A. Yes, sir.

Q. And did you see it had a symbol "USCIP" stamped on it?

A. Yes. That was cast into the metal.

Q. And that stood for United States—

A. Cast Iron Pipe, it was United States Cast Iron Pipe & Foundry Company, those initials.

Q. Are you familiar with that company?

A. I have known about its existence for years.

Q. Is it still in existence? A. Oh, yes.

Q. Making this pipe?

A. The best cast iron that is probably available.

Q. The pipe completely held its shape, didn't it?

A. It did. That is one of the characteristics of graphitic corrosion.

Q. What do you estimate these inspections you are telling us about would cost, digging up this floor and going down eight feet to this pipe all along these leads, what would that cost?

The Court: What difference does it make what it [360] would cost? We have got an economic condition here. This witness stated this morning that it is cheaper to take a chance of a break than it is to dig it up and inspect it. You take your chances on it. How would this witness know what it would cost, whether it cost \$10 or \$10,000?

Mr. Yoakum: He is an economic specialist, he said.

The Court: I don't know by looking at a job that he can say it is going to cost so much in dollars

(Testimony of J. F. Brennan.)

and cents. Let's admit it is going to be a very expensive proposition. I am willing to admit it is an expensive proposition.

Mr. Yoakum: I think whether a person is a prudent man or not depends somewhat on what it is going to cost you to take some other course. That was the purpose of asking the question.

The Court: He didn't make any estimate of what it would cost to remove the soil, to dig through the cement, and lay open the pipe. I will take judicial notice of the fact that it would have been a very expensive proposition to have made a physical examination of that pipe.

Q. (By Mr. Yoakum): In your experience does new pipe, recently installed pipe, frequently give trouble, break?

A. Yes. We had, our company had some pipe installed at Mills Field, which is a tidewater area in San Francisco, and we had failures within two years. [361]

Q. Would this pipe last longer if the water around it were fresh water than if it were salt water?

A. I think it would. Of course, if the soil contains some salt, that would furnish a good electrolyte. It would permit this galvanic corrosion to proceed.

Q. Even if it were virtually drinking water?

A. Oh, yes.

Q. It would?

(Testimony of J. F. Brennan.)

A. Surely. Drinking water will conduct electricity.

Mr. Yoakum: That's all.

The Court: Any redirect?

Mr. Verleger: Just a couple of questions, your Honor, and that's all, I promise.

Redirect Examination

By Mr. Verleger:

Q. You spoke of a 2.8 Corfield out in the street. I am not quite clear on it. Is a 2.8 Corfield index actually a good or a bad index?

A. Between 2 and 3 is rated as bad.

Q. One other query. You were asked a good many questions about what the practice in your company is when no difficulties have been experienced. This particular situation, you could assume that on this system serving these various warehouses here, there have been at least two breaks [362] prior to this one, and in addition the meter readings show a flow into this system of approximately 100 cubic feet a day that isn't being used, which has been partially explained on the basis of leaks around joints, things of that sort. Is that a condition where nothing is the matter?

Mr. Yoakum: The question is objected to on the ground it misstates the evidence and doesn't include in it the element that none of these breaks——

The Court: Sustained. I think you are trying to get the witness to speculate.

Mr. Verleger: All right. Your Honor, with that, I will stop, then.

The Court: May this witness be excused?

Mr. Verleger: May this witness be excused?

Mr. Yoakum: Yes, sir.

The Court: You may be excused.

The Witness: Thank you, sir.

(Witness excused.)

The Court: You may proceed. Call the next witness.

Mr. Verleger: Your Honor, we rest.

I did forget one thing, your Honor. We have not as yet offered in evidence our Exhibit No. 1 for identification, this chart here, which was marked by various of the witnesses.

The Court: It may be admitted in evidence.

Mr. Verleger: Thank you, your Honor. [363]

The Clerk: Plaintiff's Exhibit 1 admitted in evidence.

(The exhibit heretofore marked Plaintiff's Exhibit 1 was received in evidence.)

Mr. Yoakum: May we have a direction marker put on, please?

The Court: Oh, yes.

Mr. Yoakum: Because it is misleading the way it is.

The Court: Can somebody mark it?

Mr. Verleger: We will take care of it at the next intermission, if the Court please.

With that, the plaintiff rests.

Mr. Yoakum: At this time, if the Court please, the City makes a motion for nonsuit on two grounds.

One, there has been no negligence shown. If you read the authority cited on page——

The Court: Make your motion and don't argue the motion.

Mr. Yoakum: On the grounds, one, that there has been no negligence established as far as this defendant is concerned.

Two, on the ground that the evidence clearly shows that there was a governmental function here involved and that the requisite notice was not brought to the requisite heads of the departments charged with the correcting. [364]

The Court: Motion denied.

Call your witness.

Mr. Verleger: Your Honor, if counsel would like to take the afternoon recess a little early to get organized, have no objection.

Mr. Yoakum: It is a matter of opinion, but I feel organized.

Mr. Verleger: Okay. I was trying to be helpful.

Mr. Yoakum: Mr. Martin, please.

ARTHUR RAYMOND MARTIN,
called as a witness on behalf of the defendant City
of Los Angeles, having been first duly sworn, was
examined and testified as follows:

The Clerk: You may take the stand, and state
your name, sir.

The Witness: Arthur Raymond Martin.

Direct Examination

By Mr. Yoakum:

Q. What is your occupation, Mr. Martin?

A. I am a civil engineer.

Q. You are employed by the Harbor Department
of the City of Los Angeles?

A. Yes, sir. [365]

Q. And have been for how long?

A. About 37 $\frac{1}{4}$ years.

Q. What is your title down there?

A. I am now assistant harbor engineer.

Q. Are you familiar with the type of construc-
tion of these transit sheds on Pier 1, particularly
referring to transit sheds 58, 59 and 60?

A. Yes.

Q. Will you briefly describe the construction?

A. The structure is classified in accordance with
the Building Code as a Type 5 building. The build-
ing is 100 feet in width and 1800 feet in length and
divided into three sections, each 600 feet in length,
by a concrete division wall at the 600-foot points.

The frame of the building is what is known as
structural steel. That would refer to the roof trusses,

(Testimony of Arthur Raymond Martin.)

which span 100 feet. The roof construction is timber sheathing on structural steel supporting members. The side walls are corrugated metal on steel supporting members.

The face course around the east side of the building consist of masonry at a height of approximately 41½ feet.

Q. Are you familiar with how that building is classified as to occupancy under the Building Code of the City of Los Angeles? [366]

A. Well, it is the most economical type. It was a Class 1, which would be a strictly fireproof building, and you go on down the scale.

Q. I mean as to use. Do you know whether it is classified as to the use under the Building Code?

A. It could be put to different uses. At the present time G-3 would indicate general storage of cargo.

Q. That is its general usage, for storage of goods?

A. Yes.

Mr. Yoakum: That's all I have.

I have some documents that have been marked here that I would like to introduce at this time, but I don't need to examine the witness further.

Mr. Verleger: No cross-examination.

The Court: You may step down.

May the witness be excused?

Mr. Yoakum: Yes.

The Court: The witness may be excused.

(Witness excused.)

Mr. Yoakum: At this time I would like to offer Defendants' Exhibit B, which is Ordinance No. 97629, certified copy, of the City of Los Angeles.

Mr. Verleger: If anybody wants to look at it, I have a better copy.

Mr. Yoakum: That isn't it. [367]

Mr. Verleger: I am sorry.

The Court: It may be received in evidence.

The Clerk: Defendants' Exhibit B in evidence.

(The document heretofore marked Defendants' Exhibit B was received in evidence.)

Mr. Yoakum: The next document, which has not been marked, is a certified copy of Section 5703 of the Los Angeles Municipal Code.

The Court: It may be received in evidence.

The Clerk: Exhibit O in evidence.

(The document referred to was marked Defendants' Exhibit O and was received in evidence.)

Mr. Yoakum: And then a certified copy of Division I, Section 91.0101 of the Los Angeles Municipal Code. There are some further subdivisions.

The Court: It may be received in evidence.

The Clerk: Defendants' Exhibit P in evidence.

(The document referred to was marked Defendants' Exhibit P and was received in evidence.)

Mr. Yoakum: The next one will be a certified copy of Section 91.0301 of the Municipal Code.

The Court: It may be admitted in evidence.

The Clerk: Defendants' Exhibit Q in evidence.

(The document referred to was marked Defendants' Exhibit Q and was received in evidence.) [368]

Mr. Yoakum: Next will be a certified copy of Sections 91.0501 to 91.0506.

The Court: It may be received in evidence.

The Clerk: Defendants' Exhibit R in evidence.

(The document referred to was marked Defendants' Exhibit R and was received in evidence.)

Mr. Yoakum: I will call Mr. Smith, please.

HENRY C. SMITH,
called as a witness on behalf of the defendant City of Los Angeles, having been first duly sworn, was examined and testified as follows:

The Clerk: You may take the stand, and state your name, please.

The Witness: Henry C. Smith.

Direct Examination

By Mr. Yoakum:

Q. By whom are you employed?

A. City of Los Angeles, Harbor Department.

Q. How long have you worked for them?

A. Approximately 11 years.

Q. Where do you work, Mr. Smith?

A. In the engineering department.

(Testimony of Henry C. Smith.)

Q. As part of the engineering department records, do you have a record there showing underground cast iron pipe [369] installations maintained by the Harbor Department in the harbor area?

A. That is correct.

Q. Did you at the request of the attorneys cause to be prepared a summary of these pipe installations?

A. Yes, sir.

Mr. Yoakum: Now I do want to avail myself of Mr. Verleger's offer until I can find that document.

The Court: We will take our afternoon recess. The court will now stand in recess until five minutes after 3:00.

(Recess.)

The Court: You may proceed.

Q. (By Mr. Yoakum): The last question was if you prepared a summary of cast iron pipe in the harbor area at the request of the attorneys.

A. That is correct.

Q. The Harbor Department piping?

A. That is correct.

Q. Did you get that from permanent harbor records?

A. Well, from the drawings, preliminary drawings we made years ago and the available records we have in our engineering vault.

Q. They are part of the permanent records? [370]

A. That is correct.

Q. And you set forth certain information in a summary form, did you?

A. That is correct.

(Testimony of Henry C. Smith.)

Mr. Yoakum: This next document has been marked Exhibit S for identification.

(The document referred to was marked Defendants' Exhibit S for identification.)

Q. (By Mr. Yoakum): I show you this document here consisting of a cover page and the pages Nos. 1 to 15, in addition to the cover page. Is that the document that you prepared?

A. That is correct.

Q. Is this cover page a summary of the information that appears on the other pages?

A. That is correct. This is a summary of pages 1 to 15.

Q. And 10-inch indicates 10-inch pipe underground?

A. 10-inch diameter, that is correct.

Q. And 8-inch and the 6?

A. That is correct.

Q. Calling your attention specifically to one called Terminal 4, I turn to a page called Terminal 4 here. Is Terminal 4 the same as Pier 1?

A. Yes.

Q. And that includes the piping that goes out of Pier 1? [371]

A. That is correct.

Q. And that shows the length and the size and the approximate number of feet?

A. And location.

Q. And location?

A. Yes.

Q. The same with the rest of them, and some sheets you have a terminal, but you show no piping, and at that time——

(Testimony of Henry C. Smith.)

A. As of 3-12-56, we owned no piping in that terminal.

Mr. Yoakum: We offer this summary as Defendants' Exhibit S.

Mr. Verleger: No objection.

The Court: It may be received in evidence.

The Clerk: Defendants' Exhibit S admitted in evidence.

(The document heretofore marked Defendants' Exhibit S was received in evidence.)

Mr. Yoakum: Your witness.

Mr. Verleger: I have no questions.

Mr. Yoakum: May the witness be excused?

Mr. Verleger: Surely.

The Court: You may be excused.

(Witness excused.)

Mr. Yoakum: I will call Mr. Brashier. [372]

CHARLES VINCENT HARVEY BRASHIER,
called as a witness on behalf of the defendant City
of Los Angeles, having been previously duly sworn,
was examined and testified as follows:

The Clerk: You are still under oath, Mr.
Brashier, so you may take the stand.

Will you state your full name, please?

The Witness: Charles Vincent Brashier.

Mr. Yoakum: I will try my best, your Honor, to
avoid covering anything that was covered already,
but I may occasionally fall in error in that respect.

(Testimony of Charles V. H. Brashier.)

Direct Examination

By Mr. Yoakum:

Q. So far as you know, since you have been there, have there been any changes in that lead going off to fire line and into 59, the one that broke, up to March 12, 1956?

A. None to my knowledge.

Q. And you were there all the time since the latter part of 1919?

A. Yes, sir.

Q. What was your duty? I know you were a pipefitter and a pile driver in the early stages of your employment, is that correct?

A. I was a pile driver, then pipefitter and plumber and then plumber foreman. [373]

Q. When you became a plumber, were you a journeyman plumber?

A. Yes, sir.

Q. When did you start acting as plumber?

A. It seems to me it was about the spring of 1922 that I started acting as—I was rated as a pipefitter, but I did both the installation of fire protection work, which is the pipefitting class, and the sanitary plumbing, as it existed upon the docks. There is two separate trades.

Q. And then you became foreman in the '30s, plumber foreman?

A. I became plumber foreman in 1949.

Q. In 1949. Now, while you were plumber and then thereafter a plumber foreman, what was your duty with respect to maintenance of pipes under the Harbor Department jurisdiction?

(Testimony of Charles V. H. Brashier.)

A. Working as a journeyman, I actually repaired or installed new work at the direction of my immediate superior.

Q. Did you do maintenance work in connection with pipes? A. Some.

Q. When the repairs were required to the system, when it became evident it needed repair, was it done by you or by some other plumber in the department?

A. Most major repairs were made by me.

Q. Did you do such work as you considered to be necessary [374] to keep the pipes in operating condition?

A. Only at the instruction of my superior.

Q. From what you observed, did the Harbor Department keep its pipes in good operating condition?

A. Yes, as far as I know.

Q. Did your maintenance work at any time include digging up any of the concrete to see if the pipe didn't show any leak, needed any attention?

A. No. I was never called on to break up or dig a ditch just to find out if there was anything wrong with the pipe.

Mr. Yoakum: I have here a map, and a copy of it has already been furnished to counsel, and I would like to have it marked as our next in order.

The Court: It may be marked.

The Clerk: Mr. Yoakum, I have marked Exhibit T for identification. The reporter should have it in his record.

Mr. Yoakum: Thank you.

(Testimony of Charles V. H. Brashier.)

(Exhibit was marked Defendants' Exhibit T for identification.)

The Clerk: Then this exhibit will be U for identification, this map.

(The map referred to was marked Defendants' Exhibit U for identification.) [375]

Q. (By Mr. Yoakum): Can you see that map, Mr. Brashier, that I have just put on the board, U for identification. If you can't, you may step down here.

A. (Witness leaving stand): I recognize that map.

Q. What does it generally describe?

A. It describes pipe on Signal Street south of 22nd Street, the land side of Berths 57, 58, 59 and 60, six-story concrete warehouse No. 1, and warehouse No. 2.

Q. Does that describe the situation that existed there on March 12, 1956? A. Yes, sir.

Q. I call your attention here to a number, it is upside down, but it is No. 692, more or less opposite Berth 58. I ask you if you are able to tell us what that indicates? A. Right here?

Q. Yes (indicating).

A. That indicates a service connection on the fire main between the city water main, city 10-inch water main, and the Los Angeles Harbor Department 8-inch fire main.

Q. On this map, Exhibit U for identification,

(Testimony of Charles V. H. Brashier.)

there is no pipe shown laterally connecting the 10-inch to your 8-inch fire line. In fact, was there a pipe connecting at that point?

A. Yes, sir. [376]

Q. I wonder if we may put that in with a red line. We will mark that. Would it be right about in the middle of this?

A. No. It would be so it come out just this side of that valve.

Q. The valve?

A. Yes, right there (indicating). 4 to 10 feet.

Q. I will call that red lateral B-1. With that addition, the map clearly portrays the layout there March 12, 1956, does it, as a whole, and the connections off the city main? A. Yes.

Q. The 10-inch main that is down Signal Street wasn't maintained by the Harbor Department, was it? A. No.

Q. That was the main line, main transmission line of the Water Department? A. Yes, sir.

Q. And then the line that more or less parallels it, tell us what that line is.

A. That is the 8-inch sprinkler main or 8-inch fire main.

Q. That was maintained solely by whom?

A. The Harbor Department.

Q. What is the size of these laterals that connect the [377] 10-inch main with the Harbor Department 8-inch main?

A. 8 inches, as I recall it.

Q. Was all the piping shown on that diagram

(Testimony of Charles V. H. Brashier.)

that was west of the Harbor Department's 8-inch fire line maintained exclusively by the Harbor Department? A. Yes, sir.

Q. In other words, the Water Department didn't come in there at all, did it? A. No, sir.

(Witness resuming stand.)

Mr. Yoakum: We offer that map as our next exhibit.

The Court: It may be received in evidence.

The Clerk: Defendants' Exhibit U in evidence.

(The map heretofore marked Defendants' Exhibit U was received in evidence.)

Q. (By Mr. Yoakum): In the month of March, 1956, who had the duty to take care of calls involving any emergency with respect to Harbor Department piping? Is the question not clear?

A. The question is not clear. Who would tell the steamship company, or who would anyone outside of the department call?

Q. When an emergency developed, whose duty was it to take care of any plumbing problems?

The Court: Mr. Yoakum, I don't know what the purpose [378] of these questions is, but as far as I am concerned, the evidence doesn't show there is any fault as far as the City is concerned, or any department, relative to responding and shutting off the water. The evidence has been it took three-quarters of an hour. I don't think that is unreasonable. If you are trying to offset that testimony, I am telling you now as far as I am concerned I don't think

(Testimony of Charles V. H. Brashier.)

the plaintiff has established any negligent action by not being able to respond immediately.

Mr. Yoakum: All right. We will just pass right over that then. Thank you.

The Court: If you go ahead, you might make me change my ruling.

Mr. Yoakum: No, I am not going to do that. I quit when I am ahead.

Q. You dug down or your crew dug down and you personally saw this broken pipe exposed when it was still in the ground, didn't you?

A. Yes, sir.

Q. Where the hole was, was the hole on the down or the up side of the pipe?

A. On the down side.

The Court: Was it clear underneath or was it to one side?

The Witness: More on the bottom. I won't say it [379] was exactly on the bottom, but it was far more on the bottom than on the side.

The Court: If you had gone down and exposed the pipe halfway, you wouldn't have been able to see the hole?

The Witness: No.

Q. (By Mr. Yoakum): Did you make any tests on the neighboring pipe there now? This may have been covered, and if it is, I beg your pardon, but did you check each side of this section that you removed to see how it appeared?

A. Yes, sir.

Q. And you left it in, didn't you?

A. Sir?

Q. You removed about how many feet?

(Testimony of Charles V. H. Brashier.)

A. Oh, I think it was about 9 feet. That is an estimate. I did not measure that.

Q. Did you check toward the source of water from that break to see what the pipe was like?

A. Yes, sir.

Q. And what did you find out by checking?

A. I found the pipe, according to my examination, about—in good shape that I could cut it off to join a new pipe to it to go back to the original.

Q. What was this line used for? What was the purpose of that water? [380]

A. To supply water to the automatic fire sprinklers.

Q. And to the hoses?

A. And to the hoses which were attached to the fire system.

Q. And there is a tank on top of the warehouse 1?

A. I misunderstood your question, but I thought you were speaking of this pipe.

Q. It may be my mistake, but I mean the water that was in that 8-inch fire line, what did it supply?

A. The sprinklers and the fire hoses which were attached to the sprinkler system in that whole area of all of the buildings.

Q. And including that tank?

A. No. The water from the tank supplied the 8-inch line. The water in the tank, most of the time is stationary, except when it gets empty. Then it must be manually filled, and it is manually filled from this 8-inch fire line.

(Testimony of Charles V. H. Brashier.)

Q. This water in this line that broke, was it used for any purpose other than the fire purposes?

A. No.

Q. It was not used for toilets or washroom purposes?

A. No.

Q. Or drinking fountains?

A. No.

Q. Prior to this break in March 1956, do you know of [381] any other corrosion failure of Harbor Department pipe before that March 1956?

The Court: Anywhere in the area?

Mr. Yoakum: Yes.

Mr. Verleger: Objected to as calling for a conclusion, particularly with respect to the corrosion failure.

The Court: Overruled. The question is, does he know of any.

The Witness: Yes.

Q. (By Mr. Yoakum): Where was it?

A. It was under the six-story concrete warehouse.

Q. Do you know when that was?

A. Approximately maybe a year either way of 1926.

The Court: Is that the only instance you know of?

The Witness: Of this type deterioration that he asked.

The Court: That is cast iron pipe.

The Witness: He didn't say breakage. He said corrosion.

(Testimony of Charles V. H. Brashier.)

The Court: That's right, corrosion.

The Witness: That is the only one of corrosion that I recall.

The Court: Where was this six-story warehouse located, approximately? [382]

The Witness: This drawing is an exceedingly dark drawing, but at the left-hand corner.

The Court: So this was in the same area then?

The Witness: Yes, sir.

The Court: But I understood the question was on an installation of the Harbor Department of cast iron pipe.

The Witness: That is the only one I can recall to mind.

The Court: For the whole area?

The Witness: For the whole area.

The Court: For the whole harbor area?

The Witness: That's right.

The Court: May I inquire, the corrosion failure on the six-story warehouse in 1926, did the water come from the same line?

The Witness: Yes. The water come out of this same 8-inch line which supplies that building, as well as 59.

Q. (By Mr. Yoakum): Did you make any study to determine what kind of corrosion caused that break?

A. I did not make any study of it, no, because it was out of my field to even be quoted or to have the ability to quote any reason for it.

The Court: May I inquire, after this corrosion failure in 1926 at this six-story warehouse, was any

(Testimony of Charles V. H. Brashier.)

investigation [383] made as to the condition of the line up and down the street, or was any investigation made of the 8-inch line?

The Witness: Not at the time of that break, only to the extent of where that deterioration quit relative to that line underneath the building.

The Court: Who fixed that?

The Witness: I replaced that pipe.

The Court: You replaced that pipe, and then didn't pay any attention to the rest of the line, is that right?

The Witness: No, sir, I did not go any place else to investigate.

Q. (By Mr. Yoakum): At that time were there any types of electrical equipment regularly traversing Signal Street?

A. The Pacific Electric was doing their switching with electric locomotives.

Q. To your knowledge, was there any method in accepted use of testing buried pipe for this corrosiveness that took place in this pipe?

Mr. Verleger: That is objected to as ambiguous as to what he means by "accepted."

The Court: I suppose you are trying to establish there was no way of inspecting this pipe except by taking it up and looking at it?

Mr. Yoakum: Yes, sir. [384]

The Court: I am willing to take judicial notice of that, the only way you could inspect this pipe is to expose it, dig down and look at it. If you are going to look at it, I think you have to look at it all

(Testimony of Charles V. H. Brashier.)

the way around. I don't know how you are going to look at the top half and not look at the bottom half.

Q. (By Mr. Yoakum): On this pipe that was taken out of the ground, except for this burst area, did you see any indication that the pipe had been abused in any way or mishandled?

The Court: Well, now, the pipe was underground, so except where it was excavated at the break, how could he see any indication that the pipe had been misused?

Mr. Yoakum: I meant the pipe that was taken out.

The Court: I didn't understand you had limited your question to that.

Mr. Yoakum: I meant to. I may not have been too clear.

Q. With reference to this 8 or 9 feet that you took out, and except for the place that gave way, did you see any evidence of abuse and mistreatment of that pipe? A. No.

Q. There has been testimony, I think when Mr. Verleger was questioning you, to the effect that there was a little meter attached to each one of these services running [385] off of the Water Department's main line, is that right?

A. Yes, sir.

Q. That would be a meter with a pipe size of approximately one inch, maybe three-quarters, or maybe an inch, is that true? A. Yes, sir.

Q. The function of it, did you say, was to detect small flows of water? A. Yes, sir.

(Testimony of Charles V. H. Brashier.)

Q. When it ran through that little detector meter, then did it flow back into your 8-inch pipe from that little one-inch pipe?

A. The water goes through from the 10-inch pipe, through the one-inch meter, back into the 8-inch fire main. It by-passes a check valve.

Q. Then it goes back into your system?

A. Well, it goes to the beginning from the back side of the check valve, which is on the city water main south of that valve, and goes around and back into the other side to register a small flow of water which would not push open the heavy 8-inch check.

Q. These detector meters would not measure a large flow of water, if it was big enough to open up the check valve? A. No, sir. [386]

Q. Did the Harbor Department own those meters? A. No.

Q. Were you ever advised about the readings on those meters?

The Court: You personally, or the Harbor Department?

Mr. Yoakum: I meant the witness.

The Witness: I could answer the question yes or no. Sometimes I was called by my office and told that some water had been used in one of these meter detectors, but it didn't occur very often—occasionally. We would go out and look to see if a valve was open some place that would cause a flow of water.

The Court: Do I understand that this flow of water was a continuous flow, or was it intermittent?

The Witness: It could be intermittent unless

(Testimony of Charles V. H. Brashier.)

you had a water leak on this 8-inch main. Say we had a hole, just a half inch of water size. The water would flow, but if that hole was plugged, there would be no more movement in the main.

The Court: If I remember the statement a minute ago, the statement was that there was 100 gallons a day passing through these meters.

Mr. Verleger: 100 cubic feet a day, your Honor, which is seven or eight hundred gallons a day.

The Court: Seven or eight hundred gallons a day. [387] Then that is every day, day after day.

The Witness: Your Honor, that could occur. If we can assume that there was a broken pipe under a dock or some place where the water would not be in evidence, no one would notice this leak until such time as that meter was read before anyone would know that there was one there. Then the Water Department of the City of Los Angeles would know that we are using water that we are not entitled to use. That is the primary reason for putting that little meter on there.

The Court: But if day after day your meter showed the use of 100 cubic feet of water, that water had to go somewhere, it had to be dripping from the pipes, or it had to be dripping from a broken line, or something.

The Witness: May I explain it to your Honor?

The Court: I wish you would, yes.

The Witness: On this particular system there, there was 36 two-inch drain valves. Anyone could open one of them, or any of them could leak a steady

(Testimony of Charles V. H. Brashier.)

leak, or any number of them, which would cause some loss of water. Any leak in the joints of the pipe would cause some more loss of water, in approximately 6000 feet of pipe. A surge in pressure would surge from the 10-inch main, which goes down along the street, and shoot through these check valves and go up through the alarm valve, and on the alarm valve you had a retarding chamber to keep away false alarms, and extra water [388] shooting through there each day would then drain away without giving an alarm or knowing the water was used.

The Court: Would you consider the fact that a hundred cubic feet of water was going through these meters an indication something was seriously wrong with your system?

The Witness: Yes, sir, if that occurred every day.

The Court: As far as I know from the testimony, this 100 cubic feet was going through there every day. I don't know for what period of time.

The Witness: That would make quite as much mystery to me as it would to you, that that much water got away and no one knew about it.

Mr. Yoakum: If your Honor please, I would like to get something straightened out here.

The Court: Do we have a statement from the City as to the charges for the water?

Mr. Yoakum: Yes. This is in evidence. In the month of January, the reading of January 1956 on

(Testimony of Charles V. H. Brashier.)

one—there were three of these meters—on Service No. 8849, that is the most northerly of these meters, we had 100 cubic feet running through there in a month, 100 cubic feet a month.

On Service 2692, which is the middle one, we had 800 cubic feet. On this one——

The Court: What is the number?

Mr. Yoakum: 2690, we had 2500 cubic feet. That is [389] what we had in a month. In the next month they had 45 in the aggregate.

The Court: Forty-five hundred?

The Witness: Forty-five hundred.

In the reading of March 1st, which is the last reading before the break, there were thirty-four hundred.

Mr. Verleger: Actually, also, counsel, if you allow for the differing number of days in the reading of the meters, it evens out. They read them sometimes 30 days apart, sometimes 20, but the average is in excess of 100 cubic feet.

The Court: You still contend that the daily average was 100 cubic feet going through this?

Mr. Verleger: The first month was 3400, and if you divide that by 30, it will be over 100. The next month you have forty-five and you divide that by 30 and you come up with something over 100 cubic feet.

My impression is you can take the number of days, which was a few more than 20, for the March 1st reading, and it comes out about the same.

Likewise, the City Water Department records of

(Testimony of Charles V. H. Brashier.)

reading those meters showed this condition hadn't just started in those three months, but had run along in a similar style for a period of years.

Mr. Yoakum: I want to point out to the Court, this [390] is argument, I think, but I want to point out to the court the fact that there were leaks on readings of these meters doesn't mean at all that this pipe there, this subject pipe was leaking. That was a burst.

As the plaintiff's witness testified, Mr. Drake, I think, he testified that that type of thing breaks, bursts, and there is no dribble out of that. The leak in this system, as the witness has said, comes from joint leaks, leaded joints, nothing to do with the break at all. You try to locate it. Naturally, you can't always locate a leak from a leaded joint that is buried way down in the ground.

He has also told you some of the other reasons why there is a reading there. We haven't got far enough along in his testimony to bring out what I think will be brought out, that this isn't very much water.

The Court: You don't think 100 cubic feet is very much water?

Mr. Yoakum: Not in a system like this.

The Court: I just asked him and he said he thought it was considerable.

The Witness: I didn't mean it as you said. I meant to tell you, your Honor, I didn't know how they accounted for the 100 a day, it would be a mystery to me, except through this that I have told you.

(Testimony of Charles V. H. Brashier.)

After all, 100 cubic feet a day doesn't represent much more water than two people will use [391] during a day in their own home.

The Court: Do you have any opinion whether or not any of this water that went through those meters in January, February and March, prior to the break, went out through the break or——

The Witness: I would almost positively say no. A condition of this kind, it is my experience that one second it is together and the next second it is gone.

The Court: It would be your opinion this 100 cubic feet a day escaped from the system at some other location?

The Witness: Yes, sir, not through this hole.

Mr. Yoakum: While we are on that subject, I think you might be interested in noting that these bills show we were billed a flat rate for each service—two of the services they charge this \$10.50 a month, and one of the services they charged us \$18.50 a month, as these bills will show. We have in evidence here the bills starting with the period of November 1955 and going through to April 26, 1956.

To show you the small amount of charges that we were charged for, in addition to this flat rate, for the bill in January on one of the meters, we were charged \$4 over our basic rate.

The Court: Let me ask this witness a question, will you?

Mr. Yoakum: All right, your Honor. [392]

(Testimony of Charles V. H. Brashier.)

The Court: The fact that 100 cubic feet of water was going through the meters a day, would that indicate to you in any way that there was going to be any failure of the system?

The Witness: No, sir, for reasons like I spoke about for the loss of that water.

The Court: Would the loss of that much water indicate that the system was failing at any particular point or at many points?

The Witness: The area in which this water is served, we term a dead end. If anyone takes water above 22nd Street, they start a great surge of water, and the more water they take out of this 10-inch main, the greater the surge. When they shut it off, the water doesn't just stop. It continues with its force and it builds up and it opens and runs through these meters, building up the pressure, which raises another check valve in the alarm valve, which has a retarding device on it, and the water runs through there and runs away without giving an alarm. That is filled into a closed drain at each surge. It is why they have these retarding devices which do away with false alarms which cause the fire department and everyone to run around. That is why the water gets out. Otherwise, it would build up such a great pressure that it would soon blow your pipe apart.

Mr. Yoakum: So that there won't be any confusion [393] about it, this figure of 100 cubic feet per day, that is distributed among the three meters. It is not any per meter basis. It is all over that area.

(Testimony of Charles V. H. Brashier.)

Q. Did you tell the court about the three-quarter inch inspector's test valves that are in the system?

A. In each one of these fire systems which were—attached to the No. 36, I believe there were a couple of extra ones that were in there over that—there is a three-quarter to a one-inch valve called an inspector's test, which the Pacific Fire Rating Board, which used to be a part of the Board of Fire Underwriters, set up, and there is an inspector who goes around every so often and he opens the valves to test the alarm and test the devices to see that they work. They are situated beside the building near the sprinkler riser, about five feet six above the ground, and they flow into a closed drain. It has been my experience that we have found many times those valves to be partially open. As my crew would go through the warehouse, they were instructed to look at these valves, because the longshoremen, out of idle curiosity, oftentimes would come along and open one, not enough to give an alarm, but enough to let a stream of water run, and it would again run away out of there and the amount of water that would go through the alarm valve would go back out to your retarding device.

There wasn't enough water to force an alarm, and it [394] might run for two or three days, but it would represent possibly maybe a one-eighth, perhaps three-sixteenths stream of water, sometimes more.

Q. You say it goes into a closed drain?

A. They empty into a closed drain. In other

(Testimony of Charles V. H. Brashier.)

words, it would be impossible to spill water into the building in which they are so that anyone would notice they were leaking. The only way you would know would be turning them on, someone go by and checking.

Q. Where does the closed drain empty?

A. It runs into the ground, under the ground and out underneath the building into the bay.

Q. So if these valves are left open, they might run for quite a while before it would be noticed, is that correct?

A. Yes, sir.

Q. Do you know how many fire hoses there were in that system there, off the fire alarm system, in March 1956 and the months prior thereto?

A. I will estimate that it—approximately 38, between 36 and 40.

Q. Did you ever come in and see them lying around on the ground, I mean on the floor of the shed, wet?

A. Yes, sir.

Q. While I have got you here, I might as well ask you about this map. I don't know whether you are familiar with it [395] or not. Do you know what that map is that is marked here as Exhibit A for identification?

A. Well, it is a general layout of the harbor. In most parts of it, the terminals are marked off.

Q. You can recognize it as a fair depiction of the channel layout area?

A. Yes, sir.

Q. Do you see the area that is indicated in red?

A. Yes, sir.

Q. Can you tell that is Pier 1?

(Testimony of Charles V. H. Brashier.)

A. From here I would say that is the Signal Street pier.

Mr. Yoakum: We will offer that map as Exhibit A.

The Court: It may be received in evidence.

The Clerk: Exhibit A in evidence.

(The map heretofore marked Defendants' Exhibit A was received in evidence.)

Mr. Yoakum: I think I have nothing further.

Mr. Verleger: Your Honor, it is about 4:00. Would it be better if I commence examining in the morning?

The Court: I think we better continue with the cross-examination. Can you tell me, are we going to be able to finish this case tomorrow?

Mr. Yoakum: I think we will finish my evidence tomorrow, barring some long cross-examination, but I think I [396] will finish my evidence.

Mr. Verleger: I don't anticipate any long cross-examination. I will be surprised if this is the kind of case where rebuttal will be useful.

The Court: How long will it take you to cross-examine this witness?

Mr. Verleger: 15 or 20 minutes.

The Court: Before you start your cross-examination, Mr. Yoakum, in regard to Exhibit S, which is the number of feet of cast iron pipe in the harbor area, this says prior to 3-12-56, and it gives the date of installation. Do I understand from this exhibit that the pipe on this exhibit is still in use?

(Testimony of Charles V. H. Brashier.)

Mr. Yoakum: Up to this time.

The Court: Up to 3-12-56?

Mr. Yoakum: Yes, sir.

The Court: This is the pipe the defendant installed and it was still in use on 3-12-56.

Mr. Yoakum: Yes, on the date of the break.

The Court: I wanted to be sure I understood that.

Cross-Examination

By Mr. Verleger:

Q. Mr. Brashier, a minute ago you testified it was your experience a break like this went all at once. Were you [397] referring to graphitic corrosion? A. Yes.

Q. What was the experience to which you refer?

A. That I had never removed anything of this type but what it was always just a great big—

Q. My question was, how many times had you done that before?

A. There was twice I did that.

Q. So that when you speak of your experience with graphitic corrosion failure, you are speaking of this one instance and the one back in 1926?

A. 1926, yes, sir.

Mr. Yoakum: Just a minute. I don't think the witness testified that that was a graphitic corrosion failure in 1926.

The Court: I think he said it was a corrosion failure.

Mr. Yoakum: He said it was corrosion, that's correct.

(Testimony of Charles V. H. Brashier.)

Q. (By Mr. Verleger): At any rate, when you said it is your experience those things happen all at once, those are the two cases you have in mind, is that right? A. Yes, sir.

Q. Now, to step back a little bit further, there have been a number of breaks at various times in the pipe of the harbor and particularly in this immediate area, other than [398] the two that you have just referred to, have there not?

A. How many is several?

Q. There have been several.

A. How many is that?

The Court: More than two.

Q. (By Mr. Verleger): More than two.

A. Yes, more than two.

Q. In this immediate area there have been at least three more, isn't that correct?

A. How far is immediate?

Q. On Pier 1. A. Yes.

Mr. Yoakum: He is talking about breaks of any kind now.

Mr. Verleger: Breaks of cast iron pipe under this gentleman's jurisdiction on Pier 1.

The Court: Well, we are only interested in breaks caused by corrosion.

Mr. Verleger: Your Honor, what I was going to get at next, if I may—I think I can clarify what I am getting at in just one or two more questions.

Q. You weren't present when all the pipes in question were taken out, were you?

Mr. Yoakum: I object to the question. [399]

(Testimony of Charles V. H. Brashier.)

The Court: Overruled.

The Witness: No.

The Court: You can answer.

The Witness: I have been on vacations and been away and there could be things done, when I was not present when they were done.

Q. (By Mr. Verleger): Particularly, there was one out in front of Berth 59 October 11, 1955, out in front of Berth 59, there was a break in an 8-inch main there and you were not present when that was examined? A. That is correct.

Q. The plumbers under you have no instructions to check particularly for the presence of graphitic corrosion, isn't that correct?

A. If they were repairing the leak and they found it, yes.

Q. My question is, they are not under any instruction to make any examination, that is, by scraping away at the iron, or anything of that sort, to see if graphitic corrosion is present, is that correct?

A. A man would not instruct a journeyman exactly where to stop or repair, even if he was present. If he sent him out to repair, he would leave it to his good judgment to see the pipe was good where he repaired it. [400]

Q. So they have no instructions on that point at all, is that right?

A. No, because they are journeymen. No.

Q. Just so I am clear, of your own knowledge you don't know whether or not some of the other

(Testimony of Charles V. H. Brashier.)

breaks which occurred in this area were or were not due to graphitic corrosion?

A. I didn't see them, no.

Q. With respect to the steady flow that was going through here, you testified a little while ago——

Mr. Yoakum: Just a minute. I object to counsel's designation of that as a steady flow. If you look at those records, you will see it was not a steady flow. Sometimes there was no flow through there.

Mr. Verleger: With all due respect to counsel, I know of no time in the period of——

The Court: Objection overruled. Go ahead. I will evaluate the testimony, and also the question of counsel.

Q. (By Mr. Verleger): With respect to this flow, I take it, you testified a little while ago that the reason for this flow of approximately 100 cubic feet a day was a mystery, and I take it no one advised you prior to the commencement of this litigation that there was such a flow through these mains?

A. No one advised me. I knew from having worked with these devices that there is always a flow at different times. [401] Every time you have a false alarm, you must have a flow of water.

Q. Did you know during the three months preceding this particular break, that there was a flow of approximately 100 feet a day flowing through there? A. Will you rephrase that?

Q. Did you know that during the three months

(Testimony of Charles V. H. Brashier.)

preceding this break there was a flow of a couple of hundred cubic feet a day running through there?

A. No.

Q. What leaks do you remember so far as this building——

Mr. Verleger: Your Honor, perhaps that is covered fully. I think, your Honor, I have no further questions.

Mr. Yoakum: No questions.

The Court: You may step down.

(Witness excused.)

The Court: Court will stand in recess until 10:00 o'clock tomorrow morning.

(Whereupon, an adjournment was taken until Friday, October 10, 1958, at 10:00 o'clock a.m.) [402]

Friday, October 10, 1958—10:00 A.M.

The Clerk: No. 20624-HW Civil, Grace & Co. (Pacific Coast) v. The City of Los Angeles, further trial.

Mr. Verleger: Ready for plaintiff.

Mr. Yoakum: Ready.

The Court: You may proceed.

Mr. Yoakum: Call Mr. Alderman, please.

FRANK E. ALDERMAN

called as a witness on behalf of the defendant City of Los Angeles, having been first duly sworn, was examined and testified as follows:

The Clerk: Will you take the witness stand, sir, and state your name, please?

The Witness: Frank E. Alderman.

The Clerk: How do you spell your last name?

The Witness: A-l-d-e-r-m-a-n.

Direct Examination

By Mr. Yoakum:

Q. Where do you reside, Mr. Alderman?

A. 1508 Wayne Avenue, South Pasadena.

Q. Where is your place of business?

A. 1520 Osley Street, South Pasadena.

Q. What is your business? [405]

A. Consulting civil engineer.

Q. Do you have a firm name under which you operate?

A. Yes; Alderman & Swift.

Q. Are you a licensed civil engineer?

A. Yes; I am, in the State of California.

Q. What is your preparatory instruction, your schooling?

A. I graduated in 1934 from the California Institute of Technology with a B.S. in civil engineering.

Q. After graduating from the California Institute of Technology, did you go to work?

A. Yes; I did.

Q. Will you chronologically, as best you can,

(Testimony of Frank E. Alderman.)

tell the various occupations you have been engaged in since you went into business?

A. I went from school to work for Fluor Corporation, the Fluor Construction Company, in Los Angeles and in Illinois for them, working on construction work, surveying, drafting.

In 1932 I went to work for the Goodyear Tire & Rubber Company. Was with them for about five years in various departments, mostly in their engineering department.

In 1938 I went with the City of South Gate, and in the latter part of that year or the first of 1939 became city engineer of South Gate.

Q. What were your duties and what did you do in that job? How long did you hold that job? [406]

A. Seven years.

Q. What did you do in that job?

A. I had charge of the engineering department, the water department, streets, sewers, and allied functions.

Q. Specifically, with reference to underground piping, what were your duties, if any? What did you do?

A. I had complete charge of the water system, its operation, design of new facilities, designed and built several new areas of castiron water mains, installed castiron water mains in several areas of the city, operated the system in its entirety.

Q. You left there, that employment, some time in 1945. What happened then?

A. I went with Holmes & Narver.

(Testimony of Frank E. Alderman.)

Q. Will you tell us what they are?

A. They are a consulting engineering firm in Los Angeles. I went with them originally to make a study of the water system at the Inyokern Naval Base and to write a report on that system. I wrote the report and then supervised the design of certain improvements to the system based on recommendations in that report. That lasted until about October of 1945.

At that time I went back into the Los Angeles office. I had been at Inyokern during most of the previous time. I worked for them then until 1949, designing various [407] facilities for cities, for the Army and Navy, and various other clients. These consisted of civil engineering facilities, including water systems, sewers, and storm drains.

Q. This Inyokern system related to work on underground water pipe, did it? A. Yes.

Q. While you were with Holmes & Narver, did you have any overseas assignment?

A. Yes. I went to Okinawa for a period of about two months on special assignment to design water and sewer facilities, and upon completion of that work came back.

Q. That was for the Army?

A. Yes. Holmes & Narver were doing it for the Army.

Q. Did that work entail working with underground pipe? A. Yes.

Q. Since 1949, when you opened your own office, tell me just generally the nature of your clientele

(Testimony of Frank E. Alderman.)

and business activities, and particularly related, if you had any, to activities concerning underground cast iron pipe installations.

A. Well, we have designed cast iron pipe for a number of cities, including Escondido, Manhattan Beach, and various others, many water districts, written reports, complete comprehensive reports for about eight or ten cities, El Segundo, Arcadia, Glendora, Manhattan Beach, Brea, and a number of others, as well as many water districts and mutual water companies. [408]

Q. During the course of your career, have you done any theoretical, as distinguished from practical work, in connection with pipe installations, I mean studying of texts, familiarizing yourself with water operations, water line operations generally in the country?

A. Yes. I have followed the trade literature quite closely for 20 years or more and have read many such articles.

Q. Did you in the early part of 1958 at my request go down to the harbor, specifically to the area known as Pier 1, on which Berth 59 resides?

A. I didn't catch the date you mentioned, but I can give you the exact date I did go down there.

Q. Are you looking now at some notes that you made, that you prepared?

A. Yes, if I may refer to them. On March 21, 1958, I did visit the harbor for that purpose.

Q. Did your associate, Mr. Swift, go with you?

A. Yes; he did.

(Testimony of Frank E. Alderman.)

Q. Did you meet Mr. Perkins of the Harbor Legal Department, this gentleman over at the table?

A. Yes.

Q. Where did you go? Just tell the court what you did when you got down there.

A. Well, we visited the site at Berth 59 where we were [409] told that the sprinkler main had broken, were shown the location, and after looking that over, went over to the Harbor Department yard and were shown certain sections of pipe, which we were told came out of the line which had broken.

We took some photographs of these various pieces of pipe and I asked that a piece be cut off one of them and delivered to my office. I gave instructions as to where it was to be cut and how.

Q. Was it cut while you were there?

A. Not while I was there, but it was cut and delivered to my office later.

Q. Is this the one that was delivered to you?

A. Yes; it is.

Q. Did it have that marking on there that appears to be a part of it, a 5 and a 9?

A. There was a part of a 5 and a 9, yes. If you care to, that fits on one of these pieces down here, and the 5 can be matched up with the portion of 5.

Q. On this one here, that is Exhibit G, is that the match-up you refer to?

A. Yes. This piece broke off later. That is the way it matches, like that.

Mr. Yoakum: That piece, your Honor, was marked V. I should have told Mrs. Smith. I think

(Testimony of Frank E. Alderman.)

it ought to be marked [410] a part of this series instead. It would be G-3, this little section.

The Clerk: I will make it G-3.

(Exhibit referred to was marked Defendants' Exhibit G-3 for identification.)

Mr. Yoakum: We will now offer that little section in evidence.

The Court: It may be received.

The Clerk: Defendants' Exhibit G-3 received in evidence.

(Exhibit heretofore marked Defendants' Exhibit G-3 was received in evidence.)

Mr. Yoakum: Now I want to have some photos marked.

The Clerk: Defendants' Exhibits V, W, X and Y marked for identification.

(Photographs were marked Defendants' Exhibits V, W, X and Y for identification.)

Q. (By Mr. Yoakum): Will you just hold those photographs so the court can see them, if he wishes to look as we talk about them? Take them in number there and just tell for the record what those pictures portray.

A. No. 1 shows a section of the pipe with a large hole in it. It is my understanding that this is the piece where the main break occurred. Also shown in the upper right-hand [411] corner are some of the miscellaneous fittings which I understand came from that vicinity.

(Testimony of Frank E. Alderman.)

Picture 2 shows a closer view of the hole in the pipe, the large hole, and also a smaller hole to the right of it, and also in the upper portion some of the fittings.

Picture No. 3 shows the spigot end of that section of pipe, with the No. 59, a portion of the No. 59 visible there, which is painted on that end. It also shows to other short pieces of pipe in the upper portion.

Picture No. 4 shows the same end of the pipe that is shown in Picture No. 3, and shows, if it is examined closely, the figure 8 can be seen on it. That is the point at which we ordered the pipe to be cut, and the 8-inch portion to be delivered to my office.

Q. Those pictures were taken while you were present? A. I took the pictures myself.

Q. You took them? A. Yes, sir.

Q. Subsequently, I take it, in the next week, the section that we have marked Exhibit 3, this 8-inch section, was delivered up to you, is that correct?

A. Yes.

Q. Is that shown in No. 5?

A. That is shown in photograph No. 5.

Q. And that was also taken by you or in your presence? [412]

A. All of these photographs were taken by me.

Q. All four sheets?

A. Yes; that is correct.

Q. After you got that section that is shown in picture No. 5, what did you do?

(Testimony of Frank E. Alderman.)

A. I was interested in making a test of this, a bursting test. I arranged with Pipe Linings, Incorporated, to machine some parts which could be used in applying pressure internally to this section of the pipe to determine its bursting strength.

Q. What does No. 6 show there?

A. No. 6 shows two steel plates, which had been machined by Pipe Linings, Incorporated, in their shop. These are circular pieces of one-inch steel plate with eight holes bored around their periphery for one-inch bolts. Also, each one has a section machined out, a slot to receive the end of the pipe. The pipe is sitting in the slot on one of the plates, and the other plate is shown turned upward. This plate should be inverted and placed on top of the pipe, which is its position in the test.

Q. Those plates are the same things that are referred to as flanges?

A. Yes; they are a type of flange. The slot in the plate is machined considerably larger than the outside of the pipe so that there is plenty of room for movement of the [413] pipe expanding in the slot without coming against the shoulder of the slot.

Q. Now, will you please explain No. 7?

A. No. 7 shows the pipe and flanges being assembled with one-inch bolts, gaskets were placed in the slots, rubber gaskets which I have here (indicating), and one was placed at each end of the pipe to keep water from leaking out. Then the

(Testimony of Frank E. Alderman.)

whole was assembled with these bolts and they were tightened down to prevent leakage of water.

The one flange had a hole in it tapped for a piece of pipe to be screwed in, and that was to introduce water inside the pipe.

Q. Now, then, No. 8?

A. No. 8 shows the entire assembly with the pipe connection from a source of water and with a small hand pump and a pressure gauge, the pressure gauge being between the hand pump and the pipe assembly.

Q. No. 9, is that just about the same as 8?

A. Yes. No. 9 is a close-up of the assembly and shows a portion of what No. 8 shows.

Q. No. 10, just explain that a bit, please.

A. No. 10 is a close-up, also, of a portion of what is shown in No. 8. That is the small hand pump and the pressure gauge.

Q. Now, turn to the big picture for just a moment, No. [414] 11. That is just a close-up of that hand pump and pressure gauge?

A. That's right.

Q. Is that while the test was being made?

A. Yes; it is.

Q. The reading on there of 400, what does that indicate?

A. That indicates the pressure on the inside of this section of pipe at the time the picture was taken.

Q. Measuring in what?

A. In pounds per square inch.

Q. Then go back to the sheet we left, and direct-

(Testimony of Frank E. Alderman.)

ing your attention to photograph No. 12, just tell the court briefly about that.

A. No. 12 was taken immediately after the pipe failed by bursting. The pressure at the time the pipe burst was just slightly over 500 pounds per square inch, and the pipe ruptured longitudinally throughout its complete length at just over 500 pounds per square inch.

Q. Is that rupture apparent here on the exhibit?

A. Yes; it is. It is a longitudinal crack with a very slight offset in it of about a quarter or three-eighths inch.

The Court: I would like to know what this 500 pounds per square inch means?

The Witness: Well, sir, it means that this [415] piece of pipe taken within a very few feet of the main rupture in the pipe withstood an internal pressure of 500 pounds per square inch.

The Court: Is that low, high, or what?

The Witness: The working pressure, I understand, at the time of the rupture in the pipe was about 65 pounds per square inch. It means it stood something over seven times as much pressure as the section in its immediate vicinity, within four or five feet, and in the same piece of pipe, the same length of pipe that the rupture occurred in.

Mr. Yoakum: We would offer these four now, V, W, X and Y.

The Court: They may be received.

(Testimony of Frank E. Alderman.)

The Clerk: Defendants' Exhibits V, W, X and Y in evidence.

(The photographs heretofore marked Defendants' Exhibits V, W, X and Y were received in evidence.)

Q. (By Mr. Yoakum): While you were down at the harbor in March of this year, did you study the larger pieces of pipe that had been pointed out to you as the one that had broken?

A. Yes.

Q. What did your study consist of and what did you conclude?

A. Well, the examination of those indicated that there [416] were areas in those pieces of pipe which were very soft, and these areas were on the external portion of the pipe. They could be cut rather readily with a penknife, and on examination of them in most cases, except where they had been already hammered on or cut, this softness of the pipe was not apparent until an instrument of some sort, such as a knife, was brought against it and it was cut in that manner.

Q. When you say softness, can you indicate what you mean by that on any of these pieces of pipe that we have here? Is there any of that softness left? Here is a piece that has been etched out. I don't know whether that would be easier to work with.

A. Well, there is some right there, you see (indicating).

(Testimony of Frank E. Alderman.)

Q. Is that what you scraped off, would you characterize that softness? A. Yes.

Q. What is that in the main?

A. Well, that primarily is carbon or graphite.

Q. You concluded from your study that this pipe had undergone a type of corrosion—what is the name?

A. It is generally called graphitic corrosion.

Q. Is this something entirely different from what we commonly refer to as rust?

A. Yes; it is. [417]

Q. Will you explain that?

A. Graphitic corrosion is a form of electrolysis. Cast iron is composed of iron and carbon primarily, and most of the carbon is not combined chemically with the iron, but, rather, is in the mixture as separate small pieces. It has been described in some of the literature as like cocoanut in a candy bar, or could be described like rock in concrete. These are minute, but are separate pieces. In the presence of an electrolyte such as water and any of the salts which are always present in water to varying degrees, a small battery is formed between each of these small particles of carbon and the adjacent iron. The current is induced to flow just as in the ordinary battery from the carbon cation to the anion, which is the negative side of the battery.

Q. What is the name of the negative?

A. The anion.

Q. And the name of the positive?

A. Cation.

(Testimony of Frank E. Alderman.)

Q. Are those different terms from cathode and anode? A. They are the same.

Q. They are interchangeable?

A. Well, I think so. Possibly cathode and anode would be a better term, if I may use those?

Q. The anode is the negative?

A. The anode is the negative, yes. The anion acts as [418] the negative side of the battery, and just as in any electric circuit, current must make a complete circuit, and it flows then through the electrolyte back to the carbon. This takes with it a certain amount of the iron and the iron goes into solution in the electrolyte. In that way, the iron is taken out of the casting while still leaving the carbon in its original position. That is the reason that this type of corrosion is not readily evident on the surface, but the surface may retain all of the irregularities and markings which the original had even after this corrosion has taken place.

Q. From looking at the surface, could you tell whether it was subject to graphitic corrosion?

A. No; not any that I could find that you could tell without trying it to see if it can be cut or not. I think that is quite evident, if you want to use the small piece which we cut, the small 8-inch-long section, that can be shown on that.

Q. From your experience, do you have an opinion as to whether a reasonable waterline maintenance practice would require digging up pipe of this type and in this soil, assuming the soil is highly

(Testimony of Frank E. Alderman.)

corrosive, from time to time to look at it before any trouble had developed?

A. In the line, no. I have never heard of doing that.

Q. Do you know of any method by which a person can [419] detect from the surface of the ground a trouble in a pipe that is buried several feet under the ground, water pipe? A. No.

The Court: The only way to inspect is to uncover the pipe and look at it?

The Witness: Yes. That would be the only way I would know to tell what its condition was.

Q. (By Mr. Yoakum): In your opinion, would the uncovering of a pipe like this be likely to be hazardous?

A. Well, yes, whenever you uncover a pipe, if you uncover any appreciable amount of it, you run the risk of disturbing it structurally, reducing its support that it has, and you may set up stresses in it which would be hazardous.

Q. Do you have an opinion as to the caliber of that pipe as of 1914 or before 1920? How did that pipe stack up as to quality, cast iron pipe?

A. Cast iron pipe at that time was far and away the best pipe available for waterline purposes. It was generally either that or steel pipe, and steel pipe then was—the protection available for it was not the caliber it is today, so that it was the best available.

Q. From your studies, are you familiar with the

(Testimony of Frank E. Alderman.)

length of time that cast iron water pipe had been in operation throughout this country? [420]

A. Well, it had been in service in this country in many instances over a hundred years. There is what was called, I believe, the 100-Year Club, that the cast iron people issue lists of, listing quite a large number of cities, mostly in the East, of course, which have had pipe for a hundred years or more. I say in the East, of course, because out here they haven't been in operation that long generally.

Mr. Yoakum: That's all I have, your Honor.

The Court: Cross-examine.

Cross-Examination

By Mr. Verleger:

Q. I just want to be clear on this before I start in. Let me ask you this: Is the pipe which has graphitically corroded as good as the pipe which has not graphitically corroded? A. No, sir.

Q. In other words, I take it the process of graphitic corrosion increases rather substantially the likelihood of failure?

A. It is deleterious to the pipe, yes, and reduces its strength.

Q. Now, further, this is correct, is it not, that is, that graphitic pipe has not been installed newly in this area, in areas that are highly corrosive, since 1945, is that correct? [421]

A. I didn't quite hear you.

(Testimony of Frank E. Alderman.)

Mr. Yoakum: Would you mind restating the question?

The Court: Just a minute. Would you mind getting behind the lectern? We have that there for a purpose, you know.

Mr. Verleger: I am sorry.

Q. Has cast iron pipe been newly installed in this area in areas that are known in Los Angeles to be highly corrosive since about 1937?

A. Yes.

Q. Is it generally used in such areas?

A. Yes.

Q. Now, Mr. Ashline testified earlier that the City of Los Angeles had ceased using such pipe in such areas at about that date.

Mr. Yoakum: I object to the statement. It is a misstatement. It is probably inadvertent. Mr. Ashline said that they did not use what he called unprotected cast iron pipe, explaining that they coal-tarred or enameled it.

Mr. Verleger: I think counsel is correct. I will restate the question.

Q. I take it when you refer to the use of cast iron pipe in hot areas—I should probably have asked the question differently.

Has unprotected cast iron pipe been used substantially [422] in this period of time in highly corrosive areas? A. Since 1937?

Q. Yes.

A. Well, what degree of protection is put on pipe varies a great deal among different water

(Testimony of Frank E. Alderman.)

systems. There are some—I don't know the count now, but I am sure it is in several hundred water systems in Los Angeles County, certainly in Southern California, at least, and I think it was over 60 in Los Angeles County at one time several years ago, and each one has its own practices. I am sure that many of them have put unprotected cast iron pipe in the ground in areas which were corrosive.

Q. Suppose I put the question a little bit differently. Is it thought to be good engineering practice over that period of time to put unprotected cast iron pipe in highly corrosive soil?

A. It is better practice to protect it, if possible.

Q. I take it that a competent engineer with unprotected cast iron pipe in highly corrosive soil would know that the likelihood of failure was substantially greater than in soil that was not highly corrosive, would he not?

A. Yes; I should think so.

Q. Now, I want to refer back to this. You spoke of the importance of an electrolyte in the causing of graphitic corrosion. I take it in a pipe which is in soil which would [423] otherwise be highly corrosive, but is dry on the exterior, that pipe isn't nearly as likely to corrode as one that is damp, is that right?

A. Yes. Moisture must be present to some degree.

Q. I take it again that this would mean if you are interested in protecting your pipe against

(Testimony of Frank E. Alderman.)

graphitic corrosion, and you are aware that conditions of leakage and the like are around the pipe, which would indicate the presence of moisture, it would be desirable so far as possible to correct it, isn't that correct?

A. May I hear that again?

Q. Surely. Will you read it?

(Question read.)

The Witness: I didn't understand the part about leakage around the pipe.

Q. (By Mr. Verleger): Let me rephrase the question. As far as you can, it would be desirable to eliminate leakage of the pipe system, wouldn't it?

A. That is always desirable, to eliminate leakage, yes.

Q. And the presence of leakage in and of itself around a pipe would tend to accelerate corrosion, isn't that correct?

A. Well, I can think of instances where it wouldn't, but moisture around the pipe would tend to accelerate corrosion.

Q. Now, I want to refer to this section you tested [424] there. In selecting the section that you tested, did you use any particular criterion?

A. Yes. We took it from the end of the same pipe that had failed.

Q. Did you pay any attention to the presence or absence of graphitic corrosion in the section that you selected?

A. It didn't have as much as immediately ad-

(Testimony of Frank E. Alderman.)

jacent to the place where that section had failed, but there was some evidence of it in that section.

Q. In other words, however, you picked a section where graphitic corrosion hadn't progressed as far as it was immediately in the area immediately adjacent to the break, is that right?

A. Yes; that's right.

Q. One further question. Again, isn't it common today, in installing pipe entries into buildings and the like, to guard against the result of failure such as we have here by installing them in a raceway, that is, in a passage where you have access to the pipe?

Mr. Yoakum: The question is objected to on the ground that the practice today is not in issue.

The Court: Sustained. I suppose that the installation of pipe is a great deal different than it was in 1914. It might be good practice now to do something else.

Mr. Verleger: Your Honor, the only thought I would [425] have in that connection is the extent to which your installation doesn't correspond to what is good practice today is something that perhaps ought to put you on notice.

The Court: I think you are trying to extend the area of your case here.

Mr. Verleger: Thank you, your Honor. Then I will close. No further cross.

Mr. Yoakum: Just one question.

(Testimony of Frank E. Alderman.)

Redirect Examination

By Mr. Yoakum:

Q. This Exhibit G-3, is the evidence of that graphitic corrosion apparent to the naked eye when you have a cross section of it? Can you see it on the top here?

The Court: When you go down and look at the pipe in the ground, you don't have a cross section like that. You are just looking on the outside, the exterior of it.

Mr. Yoakum: I understand that. I just wanted, your Honor, to know if it is the fact that in this piece we took—of course, we intentionally took a better piece than right next to where it had given way—there was graphitic corrosion and you can see it by looking at the cross section, not on the outside of the pipe.

The Witness: I think this piece shows the whole picture very clearly in that in the cross section—I don't [426] know whether this glass will help you any—in the cross section the extent of the graphitic corrosion can be followed. There is a little here, and here, where the crack occurred it can be seen to have extended about halfway through the middle and die out over in here again. That is about the only real evident one in about a fourth of a diameter there. However, if you look at this same area on the surface, there is no evidence of anything having taken place there in the way of

(Testimony of Frank E. Alderman.)

corrosion. A great deal of the iron has left that pipe and yet it doesn't show on the surface because it didn't displace the carbon.

Q. (By Mr. Yoakum): That is a sheath of graphite or carbon?

A. Largely so. There is undoubtedly some iron in it. Also, it is probably some of the iron which appears not to have been affected may have been slightly affected, but there is what appears to be a sharp line of demarcation.

Mr. Yoakum: That's all, your Honor.

Mr. Verleger: I just have one further question in this connection.

Recross-Examination

By Mr. Verleger:

Q. Just so I am clear, was one of the sections, this piece here, right off the end of the piece that was left in [427] the ground?

A. Yes. We have the photographs that will show it quite clearly.

Mr. Yoakum: I don't think you heard the question.

The Witness: Oh, wait. That was left in the ground? I am sorry. I almost didn't understand the question. You say that was left in the ground?

Q. (By Mr. Verleger): Yes.

A. No. It was one of the pieces which was taken out. Do you have this photograph?

The Court: The question was whether or not

(Testimony of Frank E. Alderman.)

the section you took off was adjacent to the piece that was left in the ground, if you know.

The Witness: I am not certain.

Q. (By Mr. Verleger): I see. Just one further question.

I take it the principal danger with graphitic corrosion in a piece of pipe like this, where it has progressed only part way in, is not that it is about to let go, but it indicates a condition which is progressing and which as it gets further will cause failure, isn't that about it? A. Yes.

Q. So if you find some graphitic corrosion in a pipe which has progressed substantially, even though it hasn't gone [428] clear through, it does indicate danger?

A. Yes, that's right. In order to verify these test results, I did run a computation of what I thought the bursting strength might be on this pipe, assuming that the corrosion hadn't gone any further than could be seen, and that the pipe had a tensile strength of 20,000 pounds per square inch, which is probably about what the pipe had in those days, that cast iron had in those days, the computation indicated it should burst at about 1,800 pounds per square inch. So apparently it has gone somewhat further than can be seen even on the cut section.

Q. The problem with graphitic corrosion is as it penetrates it goes clear through eventually, so you get leaks, which may be either large or small, that is about it, isn't it? A. Yes.

(Testimony of Frank E. Alderman.)

Q. So that again the existence of a leak in and of itself is some warning of graphitic corrosion?

A. Well, the evidence of leaks would be evidence of corrosion if they are that type of leak.

Q. And if your meter readings, for example, indicated there were some leaks, you wouldn't be able to tell whether it was graphitic corrosion or joint leaks or what not, unless you got down there and looked, would you?

A. Well, usually on this type of break, I think the leak will develop very fast. Certainly it will develop over [429] a period of time. It will progress, and it will increase because of the nature of the deterioration. You see, the water going through a small hole, if the graphitic corrosion had taken place clear through the pipe enough to make a small hole in one spot, the action of water leaking out of that under pressure would rapidly cut the hole and make it larger, so that over a period of time, days or months, it could be expected to increase rather rapidly in size, and in this case it probably increased in a matter of minutes into a large break.

Q. But to get back to my question, specifically, if you have a leak, you can't tell what the cause of it is unless you get down in there and find out.

A. If you have a leak, no, you can't tell what the cause is until you look at it.

Mr. Verleger: Nothing further.

(Testimony of Frank E. Alderman.)

Redirect Examination

By Mr. Yoakum:

Q. The fact that in a pipe system such as we had down here at the harbor, that fire line containing about between five and six thousand feet of pipe, in which there were approximately a leaded joint every 10 feet, in which there were 36 fire alarm test valves, which were turned on periodically to make a check to see if the system was working, would the [430] fact that you had a leakage in the entire system of, say, one hundred cubic feet of water a day over a period of time going back several months prior to the date of this break, would that, in your opinion, be any indication of the fact that this particular pipe that gave way on March 12th was dribbling water during those preceding months?

A. No; it wouldn't, with that many valves in the system alone. I would think it would be unusual if it didn't leak some. Normally, the place to look first would be at each of those valves. That would be the thing I would suspect of leaking first of all.

Q. If your wife or child leaves the faucet on in the bathroom at home, how much water will that run in the course of 24 hours, have you any idea?

The Court: It depends on how much the valve is open.

(Testimony of Frank E. Alderman.)

Mr. Verleger: Or the water pressure.

The Court: If you leave it open full, it would flood the house for you.

I would like to ask the witness a question.

Mr. Yoakum: I am through.

The Court: Would you consider a leak of 100 cubic feet a day excessive in a system this size?

The Witness: If it is all leakage and none of it is used, I think that would be excessive. [431]

The Court: Assuming that there was some leakage of 100 cubic feet a day here, do you think somebody should have gone around to investigate to see where the water was going to here, or where it was coming from?

The Witness: Yes, I think so. I understood that they did find that periodically there was use from these lines and that probably accounted for the water going through the meter.

Mr. Verleger: Object to the conclusion.

The Court: Just assume that we haven't got any evidence here of any use, we haven't got any evidence except conjecture that somebody might have turned on a valve or used any of the water. We just have going through the meter 100 cubic feet of water a day.

Mr. Yoakum: Pardon me, your Honor. We have testimony that those valves were turned on periodically for checking the alarm system to see if it was working.

The Court: I don't know what you mean by periodically, once a month, once every six months,

(Testimony of Frank E. Alderman.)

or what. Nobody has testified, as far as I know, that they were turned on. I think there has been a lot of speculation that they might have been turned on.

Mr. Yoakum: Mr. Brashier testified positively from time to time. I know he didn't tell you the month, the interval, but he said the fire underwriters come around and [432] check those valves to see there is water in the system to function.

The Court: I have no other questions.

Mr. Verleger: I have nothing further.

Mr. Yoakum: Did he answer your question?

The Court: No. I dropped the question.

The Witness: I would say in the absence of any other evidence it is being used, that it is something to look into. These detector meters are a peculiar thing. It is very difficult to tell exactly what is happening as far as quantity is concerned. They are merely an indication water has gone through, but as to the exact quantity of water, they are not designed to tell you that, because water can be used through the check valve of which this meter is a bypass and used in large quantities, and only a small portion would go through the meter, or if a hose were opened and water were taken at a considerable rate, this meter would still only register a small portion of that. So it isn't an indication of how much water went through, and is not intended to be, but only an indication that some water did go through there.

I was in on an investigation which was very

(Testimony of Frank E. Alderman.)

puzzling where we had a negative reading on the meter day after day. It took five or six of us all day long and a lot of checking to find the reason why the meter was running backward and giving us that reading. They can do some very tricky things. [433] We finally found out where it was, but they are not an accurate measure of quantity of water.

The Court: Does cast iron pipe sweat?

The Witness: No.

The Court: You don't lose any water that way?

The Witness: Through the pipe? I would say not.

Q. (By Mr. Yoakum): The testimony here is that this line is what one witness termed a dead end. Is that a common term?

A. Well, it means it runs out into a system of pipes which have no outlet. That is one reason these meters are sometimes rather tricky in the measurement of water. It is what we ran into in that particular instance. Each of those little lines having sprinklers had air in it, and there was a considerable amount of air out at the end of these lines which stayed there. As the pressure changed, the water flooded back and forth through this meter, and in the instance I speak of a check valve which it bypassed could open in one direction, but not in the other, so it let the water in, but when it went back out, it come through the meter. Each time the water pressure expanded or contracted the air in the end of each one of these dead ends, and

(Testimony of Frank E. Alderman.)

I believe what the witness meant was that these pipes all end without an outlet, so that the water cannot circulate through them.

Q. That being the case, are you familiar with the term [434] of surge in the line? A. Yes.

Q. Would a line so situated as this, that is, a dead-end line, be subject to surges in the main source of water supply?

A. It would be subject to probably considerable variations in pressure as valves were opened on the line and as water pressure was used out of it for other purposes along the line.

Q. If you have surges in the main line, would that cause any reading, any flow through these by-passes?

A. I don't know. It is difficult to say. I believe one witness testified it could, and I would have to examine that much more thoroughly as far as the fire system itself is concerned. The alarm system, I believe he testified it could go through the valve and out to your drain without setting off the alarm. But I don't know that of my own knowledge.

Q. Would you consider in a system of this magnitude and located in the ground, as it is here, that because of a reading of 100 cubic feet of water per day through three of those detector meters, or an average of 33 cubic feet per day through each of them, that prudent practice would require digging up the buried pipe?

A. No. First of all, if I were looking for it, I would look for the valves to be the source, either

(Testimony of Frank E. Alderman.)

leaking or being [435] opened by unauthorized personnel. But in the absence of water coming to the surface, you just wouldn't know where to dig, to try to start digging for it.

Mr. Yoakum: That's all.

The Court: Any other questions?

Mr. Verleger: No questions.

The Court: May the witness be excused?

Mr. Verleger: Yes, as far as I am concerned.

The Court: Court will now stand in recess until 15 minutes after 11:00.

(Recess.)

Mr. Yoakum: I have a couple more questions I would like to put to the witness.

The Court: All right.

Q. (By Mr. Yoakum): I want to show you Exhibits 25, 26 and 27, which are Los Angeles Water Department meter reading sheets covering the three fire line meters or detector meters that we have in the fire line here, and I want to direct your attention to the readings for the three months preceding the time of this break. You will note that on Exhibit 26 the reading was 100, 100 and 0 for those three months.

A. That is for January, February and March, 1956?

Q. Yes, sir. That is the three readings immediately preceding the break. [436]

On Exhibit No. 25, you will note that they read 800, 600 and 500.

(Testimony of Frank E. Alderman.)

On Exhibit 27, you will note they read 2,500, 3,800 and 2,900. A. Yes.

Q. Having in mind those readings, do you have an opinion as to whether that would be any indication that there was a quantity of water escaping from this subject pipe that gave way on March 12th?

A. No. I don't think that these readings indicate that type of leakage. I think that they would be much less constant and they would have no reason to reduce, as some of them did. They would at least get progressively greater, and I think they would get greater so fast that probably even within the same month it would be evident on the surface, rather than just the readings on the meter, because cast iron, especially, which has been attacked by graphitic corrosion, would be very soft and water has a great cutting power, and once a hole developed, it would undoubtedly open that whole surface. It could and would probably blow out, as this apparently did, but certainly would not stay the same, as steel often does, being a much harder material and less easily cut. Steel pipe would have a hole in it which would stay the same size for a long period of time. But I don't believe that that would occur in cast iron with this type [437] corrosion.

Q. You think if there had been any leak there in the subject pipe, that those readings, instead of varying up and down, would have been consistently on the increase?

(Testimony of Frank E. Alderman.)

A. At least that it probably would have gone so fast it wouldn't even have shown up on the readings. It would probably have taken place all in the same month.

Mr. Yoakum: That's all.

Mr. Verleger: One question.

Recross-Examination

By Mr. Verleger:

Q. First, with this pipe layout and this chunk as large as the size of your hand gone at that point, the flow through the pipe would open up the check valve and you would not get any reading at all through the detector meters, or nothing substantial?

A. Nothing substantial. You would get a proportional reading, but it would be relatively small.

Q. Yes. I remind you of the fact that this break took place on March the 12th. There is a reading here for April 4th, which is the next reading after that, which shows 1500 cubic feet. That itself would presumably have to have been a flow through that meter, the bulk of it, independent of this break, I take it, isn't that right, independent of the big break? [438]

A. Well, I don't know. Some would go through during the break. How much, it is difficult to say, but there would be a proportionate amount go through the meter.

Q. I call your attention to the fact that on

(Testimony of Frank E. Alderman.)

5/3/56, which I presume was after this was repaired, the flow through this particular meter drops to zero.

Mr. Yoakum: The question is objected to on the ground it indulges in an assumption that it was repaired. There is no evidence that it was repaired. If we are going to speculate on it, I think it was shut off entirely.

Mr. Verleger: Well, let me rephrase the question.

Q. At any rate, I think we can assume that on 5/3, that is after this thing had taken place, there was no longer any water flowing through this particular leak.

The Court: I think you are going to have to establish when the repair was made and when the water was turned back on. We haven't any evidence of when the repair was made or when the water was turned back on.

Mr. Verleger: I think, your Honor, Mr. Brashier testified they went in there and fixed the thing.

The Court: They did, but he didn't say when.

Mr. Verleger: He didn't give the date.

The Court: I don't have any recollection he testified it was completed on a certain day.

Mr. Verleger: May I call the court's [439] attention, respectfully, to the following fact, that is, that this does show, these records show affirmatively that the meter itself is on.

Mr. Yoakum: On the contrary, they show just the opposite, because the aggregate cubic foot reading here is the same month after month here.

(Testimony of Frank E. Alderman.)

The Court: Just don't argue here, because the exhibits are in the evidence.

Mr. Yoakum: I beg your pardon.

The Court: I don't think the readings mean anything at all unless you can establish when the repair was made and when the system went back into operation. If you can show there were no further leaks, it might be some evidence that these leaks were indication of trouble.

Mr. Verleger: Then I have just one further question of this witness, your Honor.

Q. This system, the plans indicate here that it has valves that permit you to cut off various parts of the system. Did you note that when you were down there? A. Yes.

Q. If you had a flow and you wanted to locate where the flow was localized, I take it you could turn off different parts of it and see whether you still had the leak, could you not?

A. Yes. [440]

Q. That would limit greatly the area where you had to dig to find the leak, would it not?

A. Yes, it would reduce it.

Mr. Verleger: Nothing further, your Honor.

Mr. Yoakum: Nothing further.

May this witness be excused?

The Court: Yes, he may be excused.

(Witness excused.)

Mr. Yoakum: Your Honor, at this time we

offer as Exhibit T a certified copy of City Ordinance 101484.

The Court: It may be received.

The Clerk: Defendant's Exhibit T in evidence.

(The document referred to was marked Defendants' Exhibit T and was received in evidence.)

Mr. Yoakum: Defendant rests.

Mr. Verleger: Plaintiff has nothing further.

The Court: Well, it is half past 11:00 and I assume you all want to say something after a week of trial.

Mr. Verleger: Your Honor, I wonder if we might have argument at 2:00 o'clock.

The Court: Yes. I was going to suggest we recess until 2:00 o'clock.

Before we recess, I would like to ask the attorney for the plaintiff a question. Your complaint is based on negligence. Do you contend you can recover even though you do not show negligence? [441]

Mr. Verleger: Your Honor, I would like, if I may, to phrase my answer this way. The courts have said in this particular context—well, I think negligence involves two things. It involves the duty of care and a breach of it.

The Court: Suppose I would fine that the City wasn't guilty of any negligence. Can I still find for the plaintiff on the theory that it was the City's water that caused the damage, or is the City responsible regardless of negligence?

Mr. Verleger: Your Honor, I think the City made an economic decision, and I think this is

what happened. It was cheaper to leave the pipes in than to play with them.

The Court: Can you give me a case based on economic decision?

Mr. Verleger: Well, your Honor, after lunch I will see what I can do.

The Court: I am asking the question because of the testimony of your own witness. You know, he testified that P. G. & E., if there was a break, paid off regardless of the fault.

Mr. Verleger: Yes.

The Court: That might be a policy of P. G. & E. I never knew P. G. & E. to be a Santa Claus. There might be some authority that regardless of the question of negligence, [442] the City is responsible. I wish you would see what you can find in regard to that.

Now, there is one other problem that hasn't been stressed during the trial, and yet I suppose that the evidence is in relative to the question of a waiver of the right to collect damages because of negligence. I would like to hear from you about that this afternoon. Even though I would find in favor of the plaintiff, that is, on the ground of negligence, I think there may be a clause here that precludes the plaintiff from recovering, that is, that the plaintiff or the plaintiff's predecessor have agreed not to hold the City responsible.

Mr. Yoakum: Very well. I will discuss that. The matter is discussed somewhat in the briefs, but I will be prepared to discuss it, using my brief primarily.

The Court: I might say I do not expect to decide this case from the bench.

Mr. Yoakum: I didn't hear you, your Honor.

The Court: I say I do not expect to decide this case from the bench. I will give you a chance to file some briefs, if you want, on these problems.

Mr. Yoakum: I would be glad to file any briefs, further briefs, that the court thinks will help. I think I have pretty well briefed the question, but I can always be taught something more, and if there is anything more that can help, I want to try to help the court. [443]

The Court: I am satisfied. If you don't want to file a brief, don't file it. I am just giving you the opportunity, if you want to file any additional briefs, but I am satisfied from the briefs that have been filed. I can go back and look at your authorities upon these various points.

But my experience has been that after the evidence is in and you know what the testimony is, that you are better qualified to discuss the matter than you are before the trial, when you just know what your testimony is going to be, or you hope it is going to be, and you just suspect what the testimony of the other side is going to be.

Mr. Yoakum: Well, of course, we can argue a little more categorically now, because we do have the record here and it may be a review of the salient facts and a reference to the authorities would be of help. But let's defer that matter to the end of the day.

The Court: That's all right. We can decide on that this afternoon.

We will now recess until 2:00 o'clock.

(Whereupon, a recess was taken until 2:00 o'clock p.m. of the same day, at which time the court heard argument of counsel.) [444]

Certificate

I hereby certify that I am a duly appointed, qualified, and acting official court reporter of the United States District Court for the Southern District of California.

I further certify that the foregoing is a true and correct transcript of the proceedings had in the above-entitled cause on the dates specified therein, and that said transcript is a true and correct transcription of my stenographic notes.

Dated at Los Angeles, California, this 16th day of February, 1959.

/s/ S. J. TRAINOR,
Official Reporter.

[Endorsed]: Filed February 27, 1959. [445]

[Title of District Court and Cause.]

CERTIFICATE BY THE CLERK

I, John A. Childress, Clerk of the above-entitled Court, hereby certify that the items listed below

constitute the transcript of record on appeal to the United States Court of Appeals for the Ninth Circuit, in the above-entitled case:

A. The foregoing pages numbered 1 to 120, inclusive, containing the original:

Amended Complaint, filed 11/21/56.

Answer of City of Los Angeles to Amended Complaint.

Answer to Interrogatories propounded to Defendant City of Los Angeles by Plaintiff.

Additional Answers to Interrogatories Numbered VIII, XIII, XIV, XVI, and XVII, submitted by Defendant City of Los Angeles as required by Court Order made February 25, 1957 (marked as Plaintiff's Exhibit 28).

Second Amended Complaint, filed 8/12/58.

Answer of City of Los Angeles to Supplemental Interrogatories.

Stipulation and Order, filed 8/12/58 re filing of Second Amended Complaint, etc.

Stipulation and Order, filed 9/26/58 re trial on issue of liability only, etc.

Memorandum of Opinion.

Objections to proposed Findings of Fact by Grace & Co.

Findings of Fact, Conclusions of Law and Judgment.

Notice of Appeal.

Application for order extending time for filing and docketing record on appeal and order thereon, filed 1/23/59.

Appellant's Designation of record on appeal.

Concise Statement of Points on which Appellant intends to rely.

Appellee's Designation of additional portions of record, proceedings, evidence, to be included in record on appeal.

Application for order extending time for filing and docketing record on appeal and order thereon, filed 2/25/59.

B. Three volumes of Reporter's Official Transcript of Proceedings had on: October 7, 1958; October 8, 1958; October 9, 1958, and October 10, 1958.

C. Plaintiff's Exhibits 1, 21, 22, 23, 24, 25, 26, 27, 28, 28A and 29. Defendant's Exhibits B, C, G, G-1, G-2, G-3, I, K, N, O, P, Q, R, S and T.

(Note: Due to bulkiness of Plaintiff's Exhibit 1 and Defendant's Exhibits G-1, G-2 and G-3, are being retained in Clerk's office pending further instructions from Clerk of Court of Appeals.)

Dated: February 27, 1959.

[Seal]

JOHN A. CHILDRESS,
Clerk;

By /s/ WM. A. WHITE,
Deputy Clerk.

[Endorsed]: No. 16388. United States Court of Appeals for the Ninth Circuit. Grace & Co. (Pacific Coast), a Corporation, Appellant, vs. The City of Los Angeles, et al., Appellee. Transcript of Record. Appeal from the United States District Court for the Southern District of California, Central Division.

Filed: March 2, 1959.

Docketed: March 3, 1959.

/s/ PAUL P. O'BRIEN,

Clerk of the United States Court of Appeals for the
Ninth Circuit.

In the United States Court of Appeals
for the Ninth Circuit
No. 16388

GRACE & CO. (Pacific Coast), a Corporation,
Appellant,
vs.

THE CITY OF LOS ANGELES, a Municipal
Corporation, et al.,
Appellee.

STATEMENT OF POINTS ON WHICH
APPELLANT INTENDS TO RELY

Pursuant to local Rule 17, subdivision 6, appellant, Grace & Co. (Pacific Coast), states that it intends to rely upon each and all the points set forth in its "Concise Statement of Points on Which Appellant Intends to Rely on Appeal," filed in the District Court of the United States, Southern District of California, Central Division, on January 28, 1959, and constituting pages 112 and following of the transcript of record in this appeal, and appellant, Grace & Co. (Pacific Coast) hereby adopts said statement of points as its statement of points on which appellant intends to rely as required by said Rule.

Dated: This 18th day of March, 1959.

McCUTCHEN, BLACK,
HARNAGEL & SHEA,
PHILIP K. VERLEGER,
HOWARD J. PRIVETT,

By /s/ HOWARD J. PRIVETT,
Attorneys for Appellant Grace & Co. (Pacific
Coast).

Affidavit of Service by Mail attached.

[Endorsed]: Filed March 19, 1959.